

Colorado River Interim Surplus Criteria

Final Environmental Impact Statement

Volume III Comments and Responses

U.S. Department of the Interior
Bureau of Reclamation
December 2000

Colorado River Interim Surplus Criteria

Final
Environmental Impact
Statement

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Comments and Responses

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Bureau of Reclamation
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¹This letter was submitted by the following organizations:

Defenders of Wildlife
 Environmental Defense
 El Centro de Derecho Ambiental e Integracion Economica del Sur, A.C.
 Friends of Arizona Rivers
 Glen Canyon Action Network
 Glen Canyon Institute
 Pacific Institute for Studies in Development, Environment and Security
 Sierra Club
 Fred Cagle
 Jaqueline Garcia-Hernandez

Introduction

INTRODUCTION TO VOLUME III

Reclamation, acting on behalf of the Secretary, published a Notice of Availability of a DEIS for Colorado River Interim Surplus Criteria, and a schedule of public hearings in the *Federal Register* on July 7, 2000 (Vol. 65, No. 131). Additionally, Reclamation published a Notice of Public Availability of Information on the DEIS on August 8, 2000, in the *Federal Register* (Vol. 65, No. 153) for public review and comment. Over 400 copies of the DEIS were distributed to interested federal, Tribal, state, and local entities and members of the general public for review, and the document was also available for public viewing on Reclamation's Lower Colorado Region website.

Public hearings were held to receive oral comments on the DEIS during the month of August 2000. In addition to oral comments made at these hearings, Reclamation received 68 letters with comments pertaining to the DEIS. Reclamation has reviewed all comments received during the Colorado River Interim Surplus Criteria DEIS public comment period.

As a result of Reclamation's review of comments pertaining to the DEIS, and pursuant to the requirements of the NEPA, Reclamation has prepared this FEIS. Volumes I and II of the FEIS contain the revised text of the EIS and the attachments, respectively. Volume III, this volume, contains two parts: Part A discusses oral comments received at public hearings held for the DEIS, and Part B contains copies of comment letters received by Reclamation, accompanied by Reclamation's specific responses to individual issues raised in each letter.

Reclamation received a significant number of comments regarding the purpose and need for this action (development and adoption of interim surplus criteria), and related and ongoing activities. In particular, questions were asked with regard to the relationship of interim surplus criteria to California's efforts to reduce its over reliance on Colorado River water. Reclamation believes that, in addition to the individual responses provided in Part B of this volume, it is appropriate to provide the following general response to these questions.

General Response Pertaining to the Purpose and Need of Interim Surplus Criteria

Reclamation determined in 1999 that there was a need for development of specific surplus criteria (see *Federal Register* Vol. 64, No. 27008 (May 18, 1999) in Chapter 5 of Volume I). Recent experience in preparing the AOPs for the Colorado River Reservoirs has demonstrated the difficulty in making surplus determinations without specific criteria. In addition, the most recent five-year review of the LROC, completed in 1998, produced numerous comments encouraging the Secretary to develop surplus criteria, (see *Federal Register* Vol. 63, No. 9256, at

9258-59 [Feb. 24, 1998].) Many parties, including Reclamation, have long recognized the operational benefits that accrue from development of objective, measurable, predictable criteria to guide operation of important storage reservoirs, such as Lake Mead. At the time of the last review of the LROC, the Secretary found that surplus criteria (and, if adopted, shortage criteria) should: (1) "be specific guidelines that can be used to predict measurable effects in the future, (2) be developed through the AOP process; and (3) include a discussion of the potential effects on Lake Powell spills along with possible mitigation measures." (See *Federal Register* Vol. 63, at 9259).

In response, in 1999, Reclamation proposed adoption of surplus criteria for the operation of Hoover Dam (See *Federal Register* No. 27008, May 18, 1999). The current approach to adoption of surplus criteria differs from that identified in the last LROC review only in that it utilizes a formal NEPA process for evaluation of impacts as opposed to the more informal AOP process established by the Colorado River Basin Project Act of 1968, as amended. In order to build in the ability to respond to actual operating experience, Reclamation also decided to have such criteria implement the provisions of the Decree (Article II(B)(2)) and the LROC (Article III(3)(b)), and be reviewable on a five-year basis at the same time as the LROC is routinely reviewed.

In addition to these operations-based reasons for adopting surplus criteria, current utilization of Colorado River water in the Lower Basin (which exceeds 7.5 maf), listed as one of the factors at Article III(1)(b)(ii) of the LROC, provides an additional basis for both the adoption of surplus criteria and is a factor that Reclamation considered when choosing a preferred alternative. As a result of operating experience over recent years, it is clear that one of the most important issues for Colorado River management is the need to bring use of Colorado River water into alignment with the allocation regime adopted by Congress in section 4 of the Boulder Canyon Project Act of 1928 (BCPA) (see 43 U.S.C. 617c(a)). The pressing need for attention to this important issue is exacerbated by the over-allocation of the Colorado River due to flawed assumptions of its long-term yield that were incorporated into the 1922 Colorado River Compact. For example, the average annual natural flow of the Colorado River at Lees Ferry (1906 to 1998) has recently been estimated at 15.1 maf, while the average prior to the time of the Compact (1906 to 1921) was 18.1 maf. The regime established by the BCPA limits California to 4.4 maf, absent availability of either surplus water or other unused water.

Reclamation intends to insure that the adoption of surplus criteria will provide objective and predictable criteria in a manner that will facilitate the Secretary's enforcement of the basic provisions of the *Law of the River*. As such, when Reclamation commenced this process (see *Federal Register* No. 27008-09, May 18, 1999), it recognized that efforts were underway to reduce California's reliance on surplus deliveries and that it would "take account of progress in that effort, or lack

thereof, in the decision-making process regarding specific surplus criteria.” (*Federal Register* Vol. 64, No. 27009). The information available on California’s efforts led Reclamation to propose that the term of the surplus criteria parallel the period of key activities for California’s planned reduction in use of Colorado River water.

Accordingly, the question of whether to adopt surplus criteria is primarily related to sound water resource management. Having decided that adoption of surplus criteria is appropriate and warranted at this time, the Secretary will consider the impact of interim surplus criteria on California’s need for an appropriate implementation period to reduce its over reliance on Colorado River water. As part of his final decision regarding surplus criteria, the Secretary will integrate the California issues with all other aspects of his watermaster duties, particularly its impacts on other state allocations and Tribal users.

In summary, Reclamation believes that adoption of interim surplus criteria is warranted at this time and believes that adoption of such criteria should complement the Secretary’s watermaster duties on the lower Colorado River, which include facilitating adherence to the Lower Basin’s allocation regime. Further, the adoption of interim surplus criteria is not a component of California’s Colorado River Water Use Plan, but should not frustrate California’s efforts to reduce its Colorado River usage. As such, Reclamation does not believe that the Purpose and Need statement as presented in the DEIS is inadequate. However, in light of the significant commentary on this issue, and in an effort to clarify the information presented in the FEIS, Reclamation has modified the Purpose and Need discussion in Chapter I of the FEIS to reference the relationship between the proposed surplus criteria and California’s actions to reduce its dependence on surplus water.

PART

A

PUBLIC HEARINGS AND
ORAL COMMENTS

PART A - PUBLIC HEARINGS AND ORAL COMMENTS

Reclamation facilitated a series of public hearings to receive oral comments on the DEIS. Public hearings were held between August 21 and August 24, 2000, in the cities of Ontario, California; Las Vegas, Nevada; Salt Lake City, Utah; and Phoenix, Arizona. Each of the individuals who provided oral comments are listed in Table 1, below. Transcripts were prepared for each of the public hearings to provide a written record, and are available upon request.

With one exception, each person who provided oral comments at the public hearings also submitted, or represented an organization that submitted, written comments to Reclamation. Reclamation has reviewed the transcripts of oral testimony and determined that the written comments discussed each of the issues that had been raised in the oral comments made by speakers. Because responses have been provided for each of the specific issues raised in the written comments (see Part B of this volume), Reclamation has determined that responses to oral comments are not necessary (with one exception, as noted below). Table 1 is an index of those providing oral comments and the associated comment letters which contain responses to similar issues raised in the oral comments. Note that one commentor, Mr. Wade Noble, raised issues at the Phoenix, Arizona, meeting that were not specifically reiterated in a written comment submittal. As such, Reclamation has included a transcript of Mr. Noble's statement, and has responded to the issues raised by Mr. Noble in Part B of this volume (see Letter 69).

Table 1
Persons Who Provided Oral Comments at Public Hearings

Name	Organization	Associated Comment Letter in Part B
Ontario – August 21, 2000		
James Bond	San Diego County Water Authority	Letter 27
Gerald Zimmerman	Colorado River Board of California	Letter 39
Las Vegas – August 22, 2000		
George Caan	Colorado River Commission of Nevada	Letter 43
David Donnelly	Southern Nevada Water Authority	Letter 29
David Orr	Glen Canyon Action Network	Letter 10 ¹
Salt Lake City – August 23, 2000		
Larry D. Anderson	State Division of Water Resources, Utah	Letter 46
Wayne Cook	Upper Colorado River Commission	Letter 32
Phoenix – August 24, 2000		
Herb Dishlip	Arizona Department of Water Resources	Letter 37
Larry Dozier	Central Arizona Water Conservation District	Letter 14
Doug Fant	Arizona Power Authority	Letter 35
Robert Lynch	Irrigation & Electrical Districts Association of Arizona	Letter 22
Wade Noble	Wellton-Mohawk Irrigation & Drainage District	Letter 69 ²

¹ The Glen Canyon Action Network was one of eleven organizations that jointly submitted comment letter 10 on the DIES.

² A transcript of oral comments provided by Mr. Wade Noble has been included in Part B as Letter 69.

PART

B

COMMENT LETTERS AND
RESPONSES

PART B – COMMENT LETTERS AND RESPONSES

This section contains copies of comment letters concerning the Colorado River Interim Surplus Criteria DEIS that were received by Reclamation. Also included are Reclamation's responses to each of the specific issues raised in these letters.

Comment letters have been categorized according to their source, as listed in the Volume III Table of Contents. Each letter has been subdivided into specific issues to which Reclamation has prepared responses. Specific issues are indicated with vertical black lines marked within the left margin of each letter, with sequential numbering that indicates a reference number for each issue. Responses to each issue are numbered accordingly, and are presented to the right of each letter.

INDIVIDUALS

<u>Letter #</u>	<u>Individual Name</u>	<u>Page #</u>
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2	Belles	B-4
3	Forbes Willson	B-5
4	Inskip	B-6
5	Miller	B-7
6	Zarbin	B-9

COMMENT LETTER

RESPONSES

Jayne Harkins
Manager of River Operations
Bureau of Reclamation
PO Box 61470
Boulder City, NV 89006-1470

FEB

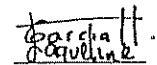
Tucson, AZ, February 16, 2000

Dear Mr. Harkins,

1 I strongly support the establishment of interim surplus criteria that include guaranteed flows for the lower Colorado River and its Delta, as outlined in the February 15, 2000 proposal submitted by American Rivers, Defenders of Wildlife, Environmental Defense, Friends of Arizona Rivers, Glen Canyon Institute, Grand Canyon Trust, Land and Water Fund of the Rockies, the Pacific Institute, Sierra Club, and the Sonoran Institute

Thank you

Sincerely,



Jaqueline Garcia
jaquelin@ag.arizona.edu
Graduate student
University of Arizona

1: The Pacific Institute Proposal was considered as an alternative but not analyzed in depth for the reasons discussed in Section 2.2.3. See responses to Comment 11-2 and 13-4

COMMENT LETTER

RESPONSES

Mark Belles
9318 Willard Street
Rowlett, TX 75088-4403

Regional Director
Lower Colorado Region
c/o Jayne Harkins
BC00-4600
Bureau of Reclamation
P. O. Box 61470
Boulder City, Nevada, 89006-1470

200/200
4600

26 August 2000

Dear Reclamation,

Thank you for the review copy of the Colorado River Interim Surplus Criteria Draft Environmental Impact Statement. Please retain my name of the mailing list for this project.

After a thorough review of the DEIS it is apparent that the various alternatives are all *very* similar and that the distinction between them is simply a matter of degree. All describe a means of meeting the purpose and need of the project and as reading Table 2-1 reveals, a comparison of them shows there are very small differences between the plans.

I would like to make a case for the **Shortage Protection Plan**, based on following criteria that might appear to have been long sacrificed on the Colorado River.

By my reading, the shortage protection plan will result in the minimum amount of water impounded by dams over the project period. I strongly recommend this alternative on the basis of "Minimum Impact." Clearly, traditional notions of "Leave No Trace" and "Minimum Impact" to the river have long been abandoned in the name of development. No one can look at Glen Canyon Dam and imagine that "Leave No Trace" has ruled the day, but as in most things improvement is made in matters of degree. The operating philosophy of the Colorado River Storage Project should be to **operate the existing system with as little impact as possible to the environment**.

Clearly the impoundment of water behind a dam is a significant impact to the Colorado River, both up and down stream. The choice of alternatives should be the one that impounds the least water for the least time and thus allows the natural river systems to operate as normally as possible.

Thank you for the opportunity to comment,

Mark M. Belles

1: Reclamation notes the preference for the Shortage Protection Alternative. We also wish to note that while the Shortage Protection Alternative would tend to produce the lowest reservoir levels, it shares with all alternatives the probability that the reservoirs would refill during periods of above-normal runoff.

Page 1

S055642313

RECORDING

1-067 P-1X11

SEP 06 00 09:04

6 September 2000

Verna Forbes Willson (Mrs.)
Post Office Box 2778
Farmington, NM 87499-2778Ms. Janet Steele, Attention: BCOO-4601
Post Office Box 61470
Boulder City, NV 89006-1470SUBJECT: Colorado River Interim Surplus Criteria:
INT-DES 00-25

Dear Ms. Steele:

My only comment on the DSEIS for the subject surplus criteria is this:

"Although the states of New Mexico and Colorado will be those most impacted by a decision that any of their water from either the Animas or San Juan Rivers which drain into the Colorado River might be considered surplus, not one of your meetings prior to opening your DSEIS for public comment was held in either state. How can the public comment on anything from which they have been excluded by distance, lack of information as to meeting dates, and secrecy?"

I do have two more questions: How can one intelligently comment when one is not informed that one will be impacted by the dealings of Big Government in situations such as this? Although our appointed local San Juan Water Commission MAY have been informed, our elected representatives on the three City Councils in San Juan County, NM were not made privy to the situation. Why not?

Sincerely,

Verna Forbes Willson

1: The EIS was prepared in close coordination with our Upper Colorado Regional Office in Salt Lake City, Utah. We have relied upon their involvement along with input from stakeholders of the Upper Basin states during the scoping, document preparation and public review processes to ensure Upper Basin issues and concerns are adequately addressed in the EIS. It is not accurate to consider water from the Animas or San Juan rivers, or any other of the Upper Basin tributaries, as surplus. It is only water in Lake Mead that the Secretary could make available for use in the Lower Division states that would be considered "surplus." Impacts of the surplus alternatives to the Upper Basin are limited to changes that may occur to the water levels in Lake Powell.

David Hayes and Robert Johnson
 Jayne Harkins,
 Manager of River Operations,
 Bureau of Reclamation,
 PO Box 61470,
 Boulder City, NV 89006-1470

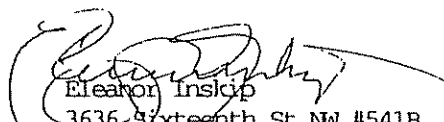
February 18, 2000

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1 I support the establishment of interim surplus criteria that include guaranteed flows for the lower Colorado River and its Delta, as outlined in the February 15, 2000 proposal submitted by American Rivers, Defenders of Wildlife, Environmental Defense, Friends of Arizona Rivers, Glen Canyon Institute, Grand Canyon Trust, Land and Water Fund of the Rockies, the Pacific Institute, Sierra Club, and the Sonoran Institute. *It would be a grand move!*
Free the Colorado

Please do not hesitate to contact me. Thanks -

1. The Pacific Institute Proposal was considered as an alternative but not analyzed in depth for the reasons discussed in Section 2.2.3. See responses to Comment 11-2 and 11-6


 Eleanor Inskip
 3636 Sixteenth St NW #541B
 Washington DC 20010

COMMENT LETTER

RESPONSES

Dave Miller
P. O. Box 567
Palmer Lake, CO 80133
(719) 481-2003, Fax (719) 481-3452

SEP 11 2000

September 7, 2000

0000186
46.00

2 page fax (702) 293-8042

Ms. Jayne Hurlkins
Attention RC08-4600
P. O. Box 61470
Boulder City, Nevada 89006-1470

Subject: Public Comment on Draft Environmental Impact Statement,
Proposed Colorado River Interim Surplus Criteria

Dear Ms. Hurlkins:

1 Subject Draft EIS is seriously flawed because: (1) There is a high probability California's
2 Colorado River Water Use Plan is not sustainable over time; (2) The Plan ignores the
3 increased hydrologic and political risks for Upper Basin States; and (3) The values of
additional Upper Basin storage for solving Western water, power and air problems were
not considered

4 An anonymous survey among Southern California water managers would reveal serious
doubts regarding California's ability to reduce its dependence on Colorado River water
during the next 15 years. Although the Plan's objectives may seem reasonable and logical
a false sense of security can do more harm than good for the entire Western Region,
including California. Colorado River Compact guarantees for Upper Basin States would
quickly evaporate under the powerful political pressures created by California's thirsty
farmers and urban areas during a devastating drought cycle.

5 Any agreement that allocates water surpluses and shortages within Lower Basin States, can
also have profound impacts on Upper Basin States. For example, if Arizona uses Colorado
River water for groundwater banking during normal conditions, the resulting lower levels
in Lake Mead and Lake Powell, could greatly increase political pressures on Upper Basin
States during times of hydrologic crisis.

6 Upper Basin States also have good reason to be concerned with the cumulative impacts of
the 15 Year Plan with recent federal rule changes and national environmental trends. For
example, Interior implemented the Colorado River Endangered Fish Recovery Program
without first considering the multi-billion dollar impacts on future Upper Basin storage for
drought, growth, and environmental needs on both sides of the Divide. Interior is also
claiming in Colorado Supreme Court that federal hydropower operations at the Aspinall
Reservoirs preempt Colorado's right to store its unallocated Colorado River entitlements
above these reservoirs for consumptive needs of both states. National, regional, and local
environmental groups continue to use unreasonable tactics to stop cooperative headwater
storage projects that could benefit the entire Western Region.

1: Comment noted

2: Comment noted. Risks to Upper Basin states are limited due to Article III (3) (b) of the
Criteria for Coordinated Long-Range Operation of the Colorado River Reservoirs pursuant to the
Colorado River Basin Project Act of September 30, 1968 (Long Range Operating Criteria -
LROC). Pursuant to these documents, equalization criteria for Lakes Mead and Powell are
suspended as reservoir elevations decrease and demands increase. delinking effects in the
Upper Basin from surplus declarations.

3: Development of additional water storage within the Upper Colorado River Basin would not
satisfy the need for the proposed action and is therefore not addressed in this EIS.

4: Comment noted

5: See response to Comment 5-2 above.

6: Comment noted

In short, Interior's subject Colorado River proposal should not be signed without a concurrent binding commitment to evaluate, permit, and construct a viable high altitude, off-channel storage capability for Upper Basin States during the same 15 year period. The unprecedented merits of such an overlooked storage program can be quickly determined using Interior's advanced River Ware Model for simulation. A modeling effort will clearly show substantial water quantity and quality benefits for both Upper and Lower Basin States, for a small fraction of the life-cycle cost of alternatives currently being considered. The Southwestern Region's endangered species, recreation, power, and air impacts can also be included in this evaluation.

7

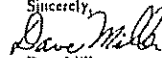
BUREC had one million dollars in its FY 1990 budget for a similar computer study of Colorado's high altitude Gunnison storage sites. Unfortunately, misguided Gunnison activists and Colorado officials were successful in killing this early BUREC effort to objectively evaluate high altitude storage for the Western Region. Regrettably, BUREC has now apparently lost its interest in high storage.

It should also be noted that a 1987 U.S. Army Corps of Engineers' simulation of the South Platte River determined that an average annual 60,000 acre feet from high altitude Gunnison storage could increase the safe yield of Denver's existing reservoirs by 111,000 acre feet. The additional multiple benefits for the entire Platte and Colorado River systems were not considered. In spite of this Corps of Engineers' study, Colorado's high storage alternatives were improperly excluded from the Final Two Forks Dam EIS for political reasons. These examples are typical of misguided federal, state, and environmental community efforts to prevent development of Upper Basin Colorado River entitlements.

8

In view of the above and the overlooked interrelationships between Upper and Lower Basin water agreements, I respectfully recommend at least a 90 day extension of time for public comment. To allow only 30 days for comments on a proposal that is 10 years in the making is both dangerous and unprecedented. This is especially true, considering the current trends against water development in Upper Basin States.

Sincerely,



Dave Miller
Independent Water Planner

cc: Council on Environmental Quality, Western Governors, Congressional Committees

7: As discussed above, the effects of interim surplus criteria on the Upper Basin are limited to changes in Lake Powell water level due to equalization provisions of the Colorado River Basin Projects Act of 1968. Given the current climate surrounding new water storage projects in the West, high elevation storage would take many years for formulation, approval and development. Your suggested commitment is beyond the scope of this EIS, which is to evaluate impacts of proposed criteria for declaring surplus conditions on the Colorado River during the next 15 years.

8: We believe that coordination between the Upper Division and Lower Division states has resulted in an adequate assessment of potential impacts to the Upper Basin. We further believe that no extension of the comment period for the DEIS was warranted. In accordance with Department of the Interior Departmental Manual, the comment period was open for 60 days following filing of the DEIS with EPA. The notice that provided the working draft of the Seven States proposal for consideration along with the DEIS specified that its availability did not change the length of the DEIS comment period.

August 14, 2000

To: Ms Jayne Harkins
Bureau of Reclamation
Attention: BCOO-4600
PO Box 61470
Boulder City, NV 89006-1470

From: Earl Zarbin
3803 E. St. Catherine Ave.
Phoenix, AZ 85040-5013

Subject: Colorado River Interim Surplus Criteria - Draft
Environmental Statement

The preferred alternative is the "No Action Alternative."

1: Comment Noted

The reason is simple: State of California interests should be required to adhere to the Colorado River water allocations specified in the Boulder Canyon Project Act of 1928, and to California's legislative act limiting the state to no more than 4.4 million acre-feet of water per year from the mainstream of the Colorado River.

State of California interests have been on notice for years, ever since approval of the Colorado River Basin Project Act in 1968, that the State of Arizona would soon be using all its Colorado River entitlement. That entities within the State of California have failed to adjust their water use accordingly is distinctly their problem, and not that of Arizona, Nevada, or the four other Colorado River Basin states.

2 It would be imprudent for any secretary of the Interior to guess as to the future of Colorado River water flows. Surplus conditions should be decided on a yearly basis based on those flows. Further, there is no assurance that State of California interests, at the end of 2015, will not want to continue using more water than California's legal entitlement.

2. Reclamation agrees that attempting to predict future inflows is an impossible task. However, even with specific guidelines in place, the Secretary will utilize Article III(3)(b) of the LROC and the guidelines in making a water supply determination for use by the Lower Division states each year in the AOP process. The establishment of specific guidelines in no way guarantees any of the Lower Division states surplus water over the next 15 years.

The time to require California to obey the law is today, not in 2016 or sometime after.

COMMENT LETTER

SEP 6 1999 3:42PM

NO 537 P. 3/3

American Water Resources, Inc.1606 HERMOSA PLACE
COLORADO SPRINGS, CO 80906

Phone: 719-633-6968

September 6, 2000

By facsimile 702-293-8042

Jane Harkins
Lower Colorado River Office
Bureau of Reclamation
Boulder City, NV 89006-1470

Dear Ms. Harkins:

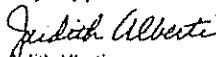
I am writing this letter to express my deep concerns on the draft environmental impact statement (DEIS) for the Colorado River Interim Surplus Criteria, currently being considered for adoption. The DEIS is concerned with the determination and distribution of surplus water conditions in the Lower Colorado River Basin during the next 15 years.

While environmental impacts must be carefully considered, it is my position that the process for adoption is negative to the Upper Basin states and the real possibility for a train wreck is substantial. In my view, it is unwise for the Upper Basin to enable California's insatiable desire for water by, in effect, putting California on what amounts to water welfare for the next 15 years, a period commonly referred to as the "Interim." What happens in the interim in California, as is the case with any recipient of welfare, a term which denotes "helping the disadvantaged," is that a disadvantaged California's claim to the water is actually strengthened. The state's promised reductions in Colorado River water use will not be realized. California's 15-year reliance on water welfare will put it in a powerful position to show that its needs are greater, its population larger, its economic prowess stronger and more valuable than that of all the other states in the compact.

The truth is that a 15-year interim water welfare state will be a runaway train, unable to slow down and at considerable risk of derailing if any state should try to do so. California is not disadvantaged, but by signing the DEIS, the Upper Basin states would be. There are other solutions which should and must be considered.

Thank you for your time and consideration in this matter. Let's work towards an agreement that will be favorable to everyone, including California.

Very truly yours,


Judith Alberti
Vice President

JA/as

1: Comment noted

10-0176701-46

PAGE 172



1408 HERMOSA PLACE
COLORADO SPRINGS, CO 80906

Phone: 719-633-6969

July 17, 2000

By facsimile 702-293-8042

Joan Perkins
L.C.R. Office
Bureau of Reclamation
Boulder City, NV 89006-1470

DEAR JUDY:

Thank you for the 81-pound CR interim surplus criteria/draft FIS. I have just read Chapter I and have serious concerns:

1. The time frame for your meetings and written comments is too close. It does not allow for thoughtful review and deliberation and is not reasonable based on the complexity of issues.
2. Why, as was the case in the June 1999 scoping letter, are no meetings held in the Upper Basin States?
3. Unfortunately, very few are competent and knowledgeable on such technical matters as the DBIS. Notwithstanding this, I believe many good citizens would be alarmed at this process and its potential consequences. This is a dynamic process and I would suggest the possibility of great insight by common people if they are made aware.
4. This report gives me the feeling of a freight train going too fast--why?
5. I know of no water institution in the United States that is ready for long-term drought. The probability of this event has never been higher. Astonishingly, everyone assumes the past 100-year water supply will continue. If I could dictate that all studies could be based on a 1,000-year best estimate of water supply, I would be doing a great favor to everyone, and most particularly California.

[illegible]

1: CEQ regulations require a 45-day minimum review period for a DEIS, starting after a Notice of Availability is published in the Federal Register. Reclamation's practice is to extend this review period an additional 15 days, allowing for a 60-day minimum comment period. The filing date of the DEIS was July 7, 2000 and the public comment period officially ended on September 8, 2000. Reclamation believes that this 63-day period allowed sufficient time for review and comment on the DEIS. One of the four public hearings to receive public comments on the DEIS was held in an Upper Basin state, in Salt Lake City, Utah. As discussed in the DEIS, the area of potential effect analyzed in the EIS is the Colorado River corridor from Lake Powell down to the SIB. Because the majority of this area is located within the Lower Basin, and because surplus determinations made by the Secretary influence water supply in the Lower Division states, holding the majority of the public hearings within the Lower Basin was determined appropriate. The NEPA process, including scoping and the preparation and distribution of the DEIS and this FEIS, has provided an opportunity for Reclamation to identify and disclose to the public the potential effects of interim surplus criteria.

JUL 17 00 12 33 FROM HINKDE ARLINGTON HTS

ID 0416705150

PAGE 2/2

Ms. Harkins
July 17, 2000
Page 2

2 | This report doesn't seem to want to address the relevant "what ifs?" I believe the public has a right to know.

I hope you will consider the need to slow down and include the other half who have the greatest risk—the Upper Basin States and their citizens

Best regards,

American Water Resources, Inc

Thomas C. Havens

Thomas C. Havens
President

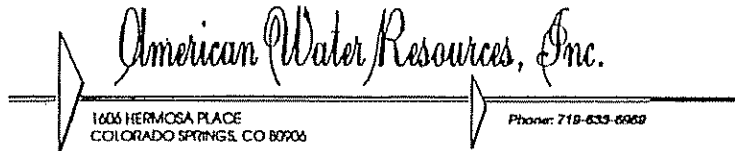
AK

2: Predictions of future climate are difficult to make, and there are conflicting points of view within the scientific community. Although the index sequential method of modeling using historical records is not a perfect predictor, it provides a rigorous representation of possible future hydrology during the coming decades. Statistical distributions obtained using this method do provide an indication of what could happen during periods of drought, using past drought scenarios as indicators.

TCB/ks

SEP 6 1999 3:41PM

NO 537 P 1/3



September 6, 2000

By facsimile 702-293-8042

Joan Harkins
Lower Colorado River Office
Bureau of Reclamation
Boulder City NV 89006-1470

Dear Ms. Harkins:

I have very serious concerns about the DEIS for the Colorado River Interim Surplus Criteria. A scenario of increased drought conditions, which are probable, make the current DEIS a prescription for serious adverse consequences, extreme risk for both the Lower and Upper Basin and possible chaos. I doubt that this agreement is enforceable. It could be dangerously contentious.

1 Since there were no public meetings in Colorado, New Mexico or Wyoming, I believe the owners of this water, the people, are not all aware of the possible consequences. Is it acceptable to drain Lake Mead by 50%? Is Lake Powell vulnerable? It may be that a more balanced and reasoned approach could produce a win/win environment. I would never sign an agreement like this that has been rushed through the process and is neither fair nor wise. We are talking about a multibillion dollar value without protection or compensation for those who are at risk. Why would the Upper Basin put themselves in such a vulnerable and weak strategic position? Why would the Lower Basin assume such a speculative position, based on surplus water that may not be there?

2 The reality is that California needs a more disciplined, creative and economic based approach. It has many serious, complicated, unresolved and unsigned internal negotiations to conclude. The Upper Basin needs to substantially reduce its risk in this deal. A multimillion dollar contingency fund should be established by California as positive incentive and to cover all the mitigation costs that may arise. The Upper Basin provides its most precious asset—water—and California provides what it has in surplus—money. Fair is fair. This is sound economics and the basis and foundation for a workable and enforceable contract.

1: Reasons the Upper Basin states support adoption of interim surplus guidelines are discussed in the interim surplus criteria proposals submitted by Six States (see Attachment E), and by the Seven States proposed criteria (see Federal Register notice in Chapter 5). Impacts to the Upper Basin states are based on changes to water levels in Lake Powell, which result from releases to Lake Mead to "equalize" storage between the two reservoirs as discussed in Section 1.4.2 of the EIS. Reclamation is only proposing surplus criteria be in effect for an interim 15-year period, during which time they would be subject to review every 5 years along with reviews of the LROC.

2: A requirement that California make progress on its Colorado River Water Use Plan may be included in ISC Guidelines. California is responsible for funding any costs associated with compliance and implementation of their plan components. This includes costs for mitigating impacts of those actions that require Secretarial approval as determined by other federal and state environmental compliance documents.

SEP 6 1999 3:41PM

NO 537 P 243

Ms. Harkins
September 6 2000
Page 2

3 The current proposal creates a water welfare state for California whose population of over 30 million is targeted to reach 50 million by 2020, a figure which is more than the combined populations of Arizona, Nevada, Oregon, Idaho, Montana, Wyoming, New Mexico and Utah. California's economic force already represents the seventh largest in the world. Compare this to Wyoming with a population of just 450,000. Should Wyoming be expected to share the risk equally?

In consideration of the DEIS proposal, which would in effect grant water welfare to California, I contend that,

- 1 California does not need welfare which is negative incentive and bad policy; and,
- 2 It is always difficult or impossible to reverse a welfare system. It is politically naive to believe California would be ready or willing to give up that benefit.

4 The Colorado River Assurance Program for California is a process out of control. Where is the accountability to the principals, the people? The politicians? We are all familiar with situations where three, five or ten years down the road, after major policy decisions have been made and implemented, inflicting adverse consequences on society, we ask, What were they thinking?

We believe this process could provide win/win solutions to these problems if a broader base of perspectives were applied and a more reasonable time frame was established. Without a solid base, this process will fall apart. We are not there now. Something is missing. Both the Upper Basin and Lower Basin must have the courage to do the right thing, not the politically expedient one.

The environmental issues are a major concern and should be appropriately addressed.

Sincerely,

American Water Resources, Inc.



Thomas C. Havens
President

TCH/aa

3 As noted in EIS section 2.3 the interim surplus criteria would terminate at the end of the 15-year period. In the absence of subsequently specified criteria, surplus determinations would be made as is currently done, as part of the annual operating plan development (AOP) process. If California is not making progress in implementing its Colorado River Water Use Plan, the Secretary may choose to revert back to 70R Strategy or the AOP process during the interim period.

4 Reclamation is not aware of any program or process by this name. It is the intent of this current process to carefully consider any potential adverse consequences of alternative courses of action discussed by this document.

Center for Biological Diversity
Defenders of Wildlife
Environmental Defense
El Centro de Derecho Ambiental e Integración Económica del Sur, A.C.
Friends of Arizona Rivers
Glen Canyon Action Network
Glen Canyon Institute
Pacific Institute for Studies in Development, Environment and Security
Sierra Club
Fred Cagle
Jaqueline Garcia-Hernandez

SEP 14 2000

Via Fax and Mail

September 8, 2000

Regional Director
Lower Colorado Region
Attention: Ms. Jayne Harkins (BCOD-4600)
Bureau of Reclamation
PO Box 61470
Boulder City, NV 89006-1470

Re: Draft Environmental Impact Statement on Interim Surplus Criteria

Dear Ms. Harkins:

Thank you for the opportunity to review and to comment on the Draft Environmental Impact Statement ("DEIS") on Colorado River Interim Surplus Criteria. We are supportive of the overall goal of returning California to its 4.4 maf share of the Colorado River, yet we do not believe that such an achievement should come at the expense of downstream riparian and aquatic habitats. The diversion of millions of acre feet of water and the impoundment of millions more have eroded and desiccated the Colorado River delta in Mexico. Fortunately, since the 1980s flood flows have revegetated the delta which has grown to 150,000 acres, though still a mere 5% of its historic size. As the Department of Interior has recognized, 80 percent of the best Lower Colorado River habitat is in Mexico, yet serious environmental harms are occurring there. The interim surplus criteria provide an opportunity to avoid and mitigate these harms, yet Interior fails to take advantage of this opportunity.

1

- 1 Therefore, we are disappointed that the Bureau of Reclamation (Reclamation) rejected consideration of the Pacific Institute alternative that would have provided a reliable measure of freshwater flows. We also have several procedural and substantive concerns with the new Seven States proposal, as well as with the DEIS itself. For several reasons, we recommend that a Supplemental DEIS precede the Final EIS: the DEIS omits a reasonable alternative; the uncertain status of the Seven States information precludes effective public comment; the California Colorado River Water Use Plan is not officially available for comment; the transboundary and cumulative impacts analyses are flawed; and endangered species impacts merit more research and evaluation.

A Supplemental DEIS Should Include An "Environmental" Alternative

- 2 The range of alternatives is an important piece of NEPA - "This section is the heart of the environmental impact statement." 40 C.F.R. § 1502.14. Contrary to Reclamation's conclusion in the DEIS, the Pacific Institute proposal is not within the range of alternatives in the document (2-3). That proposal, supported by 9 other groups, was submitted specifically to dedicate perennial flows through the river to the delta before declaration of a partial surplus and flood waters to the delta before declaration of a full surplus. No other alternative contains these or any other environmental protection or restoration provisions.

Colorado River flows that reach the Delta are the result of flood control releases in the U.S. Deliveries to Mexico were greater than 1.7 maf in only 24 of the years between 1950 and 1998. The alternatives will again halve these odds by 2015 (see Table 3.16-1), as well as reduce the quantities released. The Pacific Institute proposal provides a more reliable source of water to the delta while also providing the Basin states with predictability and California with a supply of water over its apportionment. As a reasonable alternative that satisfies the purpose and need of the surplus criteria, the Pacific Institute proposal and its impacts should be studied.

The California Colorado River Water Use Plan Must Be Included

- 3 Regarding the purpose and need of Interim Surplus Criteria, it is well known that the driving force behind their development has been the need to reduce California's reliance on Colorado River water above and beyond its apportionment; the 4-4 Plan is California's plan for doing so. See 1-22. The Six State, California and Shortage Protection Alternatives all include implementation of the 4-4 Plan in their modeling assumptions (3.3.9-10). Without the 4-4 Plan it is impossible to measure the quantities of water involved and impossible to gauge California's compliance. However, no version of the 4-4 Plan has been included in the DEIS. The California 4-4 Plan must be made publicly available, as quickly as possible, for public review and comment before the FEIS is released.

Seven States Alternative May Not Appear in the FEIS as the Preferred Alternative

- 4 On August 8, 2000, Reclamation published a notice of availability of information - the

1 See response to Comment 11-2 and 11-6

2 See the response to Comment 11-2 and 11-6

3 The 4-4 Plan has been superseded by California's draft Colorado River Water Use Plan (CA Plan), which has been publically available from the Colorado River Board of California. For more information see response to Comment 11-11.

4 Based on experience gained in modeling the operation of the alternatives in the DEIS, it was apparent to Reclamation that the shortage triggers proposed by the Seven States would place the effects of operating with those triggers and their related provisions in the midst of the range of the alternatives presented in the DEIS. It was also apparent that the effects of the Seven States Proposal would relate to those of other alternatives as a matter of degree rather than as new and different kinds of impacts. The preferred alternative in this FEIS derived from the Seven States Proposal has been subjected to the same analysis as the other alternatives in the FEIS.

cont'd

Seven States proposal - related to this DEIS 65 Fed Reg 46531 While it appears in substance to be another alternative. Reclamation has stated that it will analyze the issues and information in it along with all other public comments on the DEIS, and will not extend the comment period (d), despite the fact that it is modeling the proposal. Even though the "information" is the "product of significant effort" by the States, Reclamation may not view this new information as an alternative until the proposal's modeling runs and impacts have been subject to the NEPA processes of public notice and comment.

5

Furthermore, the proposal in its current form is not within the purpose and need of the interim criteria and is therefore an inadequate proposal. The impetus behind the interim criteria has been increased predictability of availability of surplus waters that California deems necessary to meet its needs until conservation measures are in place that have reduced consumption to 4.4 maf. The Seven States proposal does not provide a starting line by which to measure California's consumption, but given that the state has diverted up to 5.2 maf in recent years and that it expects to conserve a maximum of 490,000 af by 2016, California will not reach the 4.4 maf goal. Section VIII affirms this position by setting standards for enforcement that are even less than its expected goals. Only when the surplus criteria is based on California reducing its take of the Colorado River to its 4.4 maf share should the criteria be implemented.

6

Lastly, the Seven States proposal in sections IV B 3.d. & f, excessively constrains the Secretary's discretion, which is simply unacceptable. Allocation of unused apportionment and of surplus has always been entirely within the Secretary's discretion but this proposal attempts to restrict it further than surplus criteria require.

Compliance with the Endangered Species Act

7

The scope of the ESA Section 7 consultation on the Interim Surplus Criteria is of enormous importance yet contains several flaws. First, section 5.3.3 must be amended to read that the action area "will be within the 100-year floodplain and Lakes Mead, Mohave and Havasu to full pool elevations of the Colorado River and downstream to the Gulf of California" (5-2) (emphasized text added). In this DEIS Reclamation identifies the potential for impacts to the vaquita, totoaba, southwestern willow flycatcher and Yuma clapper rail from the decrease in frequency and amount of freshwater flows to the delta. Therefore, in an ESA consultation where the "action area" includes "all areas to be affected directly or indirectly by the Federal action and not merely in the immediate area involved in the action," 50 C.F.R. § 402.02 (emphasis added), and the Colorado River delta is clearly affected by the proposed action, the scope of the analysis must include the reach of the river and its floodplain down to the Gulf.

In addition, section 5.3.3 on ESA compliance refers only to the U.S. Fish and Wildlife Service in caption and text, implying that the National Marine Fisheries Service, the agency with jurisdiction over the vaquita and totoaba, have not been contacted regarding this consultation. See also Letter from Rodney R. McInnis, Acting Regional Administrator, NMFS to David Hogan, Center for Biological Diversity, of July 13, 2000 ("the Bureau of Reclamation has not

5: Reclamation did not structure the preferred alternative precisely as described in that draft proposal, but made some changes for consistency with the purpose and need for the proposed action. Reclamation policy and operational procedures

6: The preferred alternative in this FEIS would not change the Secretary's discretion regarding the regulation of Colorado river flows, which stems from the Law of the River. Clause IV B 3 f contained in the Draft Seven States Proposal is not included in the preferred alternative.

7: Reclamation is consulting with the Service for the delta area of Mexico, as discussed in Section 5.3.4 of the FEIS. The action area extends to the Sea of Cortez.

cont'd

contacted NMFS regarding informal or formal ESA consultation on the Department of Interior's Colorado River Interim Surplus Criteria" (Attached). This is in violation of the ESA and contrary to a memo indicated that this consultation has occurred and should continue. See Memorandum from John Lesly, Solicitor to Elvitt Martinez, Commissioner, of August 14, 2000. We hope that the August 14 memo is more indicative of the consultation that is occurring on the proposed action and that consultation with both FWS and NMFS continues.

Transboundary & Cumulative Environmental Impact Analysis is Inadequate

8

We were encouraged that Reclamation included an analysis of transboundary impacts in the DEIS. However, our hopes that past recognition of the sparse ecological and biological data on the vaquita and totoaba and their effects of modified river flows and water quality would have spurred additional research were dashed when we saw that the most of the analysis of the vaquita and totoaba were taken straight from the Description and Assessment of Operations, Maintenance, and Sensitive Species of the Lower Colorado River (Reclamation 1996). This is especially disappointing because Reclamation already knows its ongoing activities in the Lower Colorado River may affect the totoaba and that the vaquita is the world's rarest cetacean.

9

The DEIS omits any discussion of cumulative impacts resulting from the actions in the above Biological Assessment, as well as impacts from the California 4-4 Plan (not referenced in the DEIS) and off-stream banking regulations. For example, Reclamation has found that current operations along the LCR may affect the endangered totoaba, citing the lack of freshwater flows to the delta as a factor. Offstream banking, as well as the interim criteria, will reduce the amount of and probability of freshwater flows to the delta. See Biological Assessment for Proposed Rule for Offstream Storage of Colorado River Water and Delivery of Intentionally Created Unused Apportionment in the Lower Division States (1998) at Table IV-3. There is no attempt to accumulate or mitigate for these impacts. Environmental values and protections are not factors in Reclamation's hydrological models, thus this lack of cumulative impacts analysis is pervasive in the DEIS.

Recommendations

10

Overall, we recommend that this DEIS expand its scope, taking into account impacts not only downstream of the NIB, but downstream of the SIB into Mexico and the Colorado River Delta. Without discussion or analysis of the impacts, mitigation is impossible. We hope that expansion of the NEPA analysis will result in an expanded ESA consultation and protection and recovery of the critically endangered ecosystem that has been divided by an arbitrary line. A Supplemental DEIS must also include the Pacific Institute proposal, as well as Reclamation's models and impacts analysis for the Seven States submission.

8: Regarding the effects on species found in both Mexico and the United States (such as the southwestern willow flycatcher). Reclamation is consulting with the U.S. Fish and Wildlife Service. For potentially affected species found only in Mexico, Reclamation is consulting with the National Marine Fisheries Service. Concurrent with these consultations, Reclamation is also continuing its dialog with Mexico to reach mutually agreeable solutions.

9: Cumulative transboundary impacts are discussed in Section 4.2. Implementation of the Lower Colorado River Multi-Species Conservation Program (LCRMSCP) is expected to prevent adverse cumulative effects to the biological resources of the lower Colorado River. The LCRMSCP is being developed to mitigate the adverse effects on resources from current and future water diversions and power production with the cooperation of federal, state, Tribal and other public and private stakeholders. The LCRMSCP will include the creation and enhancement of habitat and augmentation of native fish species populations from Lake Mead to the SIB. The LCRMSCP is evaluating the appropriate amount of acreage for restoration. Currently, acreage estimates range from a low of 3,000 acres to a high of 80,000 acres of riparian woodland, marsh, open water and mesquite habitat.

10: Comment noted. Reclamation believes that the level of analysis for energy resources presented in the EIS appropriately identifies the potential effects of interim surplus criteria.

COMMENT LETTER



Via Fax and Mail

September 8, 2000

Ms. Jayne Harkins
Attention: BCOO-4600
Lower Colorado Region
Bureau of Reclamation
PO Box 61470
Boulder City, NV 89006-1470

Dear Ms. Harkins:

These comments are submitted on behalf of Defenders of Wildlife (Defenders). Defenders is a national non-profit, public-interest organization with over 400,000 members and supporters. Defenders works to preserve the integrity and diversity of natural ecosystems, prevent the decline of native species, and restore threatened habitats and wildlife populations.

Thank you for the opportunity to review and to comment on the Draft Environmental Impact Statement ("DEIS") on Colorado River Interim Surplus Criteria. We are supportive of the overall goal of returning California to its 4.4 maf share of the Colorado River, yet its achievement comes at the expense of riparian and aquatic habitats downstream to the Colorado River delta in Mexico. The diversion of millions of acre-feet of water and the impoundment of millions more has eroded and desiccated the delta. Fortunately, since the 1980s flood flows have revegetated the delta which has grown to 150,000 acres, though still a mere 5% of its historic size. As the Department of Interior has recognized, 50 percent of the best Lower Colorado River habitat is in Mexico, yet serious environmental harms are occurring there. The interim surplus criteria is a chance to avoid and mitigate these harms, yet Interior completely passes up this opportunity.

Therefore, we are disappointed that the Bureau of Reclamation ("Reclamation") rejected consideration of the Pacific Institute alternative that would have provided a reliable and timely delivery of freshwater flows to the Gulf of California. We also have several procedural and substantive concerns with the new Seven States proposal, as well as with the DEIS itself. We recommend that a Supplemental DEIS precede the Final EIS for several reasons: the DEIS omits a reasonable alternative; lack of impacts analysis on the 7 States proposal precludes effective public comment; the California 4.4 Plan is not available for comment; the transboundary and cumulative impacts analyses are flawed; and endangered species impacts merit more research and evaluation.

1: The overall goal of the interim surplus criteria is not to return California to its 4.4 maf apportionment. As discussed in Section 2.2.3 of the EIS, providing flows to the Gulf of California would not meet the purpose and need for ISC. The status of habitat along the Colorado River in Mexico is discussed in an analysis of impacts of the interim criteria. Reclamation has concluded that the alternatives would not result in a significant additional harm to downstream habitat and is working with Mexico to collaboratively solve problems in Mexico.

2: As discussed in Section 2.2.3, Reclamation considered the Pacific Institute proposal but eliminated it from detailed analysis. It mirrors the Six States Alternative which was analyzed in depth. The portion of the Pacific Institute proposal calling for delivery of water to the Gulf of California is not within the purpose and need for the action and thus not analyzed. A Supplemental DEIS is not required because it did consider a portion of a reasonable alternative as noted above. See Response 13-4. The Seven States draft proposal and Reclamation's Basin States Alternative analyzed in the EIS are within the range of the other alternatives analyzed and their impacts are very similar to the Six States and California Alternatives. The California 4.4 Plan is not an issue in this EIS and a working draft of California's Colorado River Water Use Plan published in May 2000 has been available for public review through the Colorado River Board of California. Endangered species, transboundary, and cumulative impact analyses have been updated as a normal course proceeding from a draft to a final EIS and no supplement is required.

Received by Defenders of Wildlife
10/11/2000 10:00 AM
Via Fax and Mail
Via Phone 202-544-7400
Fax 202-544-7400
http://www.dow.org

Exercise of the Secretary's Discretion Would Easily Cure Several of these Flaws

The failure to fully acknowledge the Secretary's discretion in managing the Lower Colorado River, especially when declaring a surplus, is the source of many of the DEIS's deficiencies.

Allocation of surplus water is a discretionary function of the Secretary that can and should be exercised consistent with other responsibilities incumbent upon him for allocating the benefits of the river. Past management decisions and allocations were made before most other responsibilities were articulated in U.S. law and policy. This has resulted in serious environmental harm. The Secretary can and should now use his discretion to ensure that his decisions result in no further harm, and where possible, in an improvement in environmental quality. A myopic characterization of the Secretary's discretion hinders meaningful assessment of the Pacific Institute alternative, transboundary and endangered species impacts, and ESA compliance.

Contrary to Reclamation's present public assertions, there is significant discretion in the Law of the River. The Boulder Canyon Project Act and Supreme Court Decree in Arizona v. California established the priorities for Colorado River waters and set flood control, navigation improvement, and flow regulation as the first priorities. The Decree enjoins the Secretary to release water in accordance with these priorities. The other top priorities, regulating the flow of the river and improving navigation, are purely within the Secretary's discretion. See Laughlin River Tours v. Bureau of Reclamation, 730 F.Supp. 1522, 1524 (D.Nev. 1999). Releases for navigation and regulation of the flow, like flood control releases, are not subject to the injunction for consumptive use amounts in Article II of the Decree. The Secretary has a public trust responsibility to protect resources that belong to the public and are so important to society that private uses cannot be allowed to interfere with public access and uses.

Reclamation asserts that "[w]ater cannot be released from storage unless there is a reasonable beneficial use for the water unless required for flood control or dam safety." (3-3-1) In one and again Reclamation claims that the same "Law of the River" that grants the Secretary of the Interior broad discretion in managing the Lower Colorado River also curtails his ability to release water and manage the river's flow. This is even more amazing in a discussion of surplus declarations, a completely discretionary task. While in the past Reclamation has narrowly defined its discretion in order to avoid ESA consultation, in this case Reclamation has done so in order to avoid analyzing an alternative that accounts for the entire Colorado River ecosystem, and to narrow the scope of NEPA and ESA consultation.

When the Secretary announced last December that surplus must be determined and allocated with no net loss of environmental benefits, he set a significant environmental standard. As the Department of Interior has recognized in past statements and in the Joint Declaration to Enhance Cooperation in the Colorado River Delta, the delta is a integral part of the Lower Colorado River ecosystem. No water shall be considered surplus until the Secretary has been

3: See above response. Note that the EIS presents information with regard to Colorado River flows to Mexico under baseline conditions and the alternatives. Note also that additional information has been added to the discussion of these flows in Section 2.16.5 of the FEIS. The allocation of surplus water is not discretionary. The decree issued March 9, 1964 by the United States Supreme Court in Arizona v. California apportioned surplus water for use as follows: 50% for use in California, 46% for use in Arizona and 4% for use in Nevada. However, the Secretary must annually adopt an Annual Operating Plan (AOP) for operation of the Colorado River reservoirs. The AOP establishes the plan of operations for Colorado River reservoirs during the coming year and establishes whether the coming year will be a surplus, normal or shortage year. The Secretary's discretion lies in his determination as to whether sufficient water is available for release to satisfy consumptive use in Arizona, California and Nevada in excess of 7.5 maf. In making this determination, the Secretary considers existing water storage conditions in the Colorado River basin and projected inflows and beneficial consumptive use requirements of Colorado River mainstream use. The respondent commented that releases for navigation and regulation, like flood control releases, are not subject to the injunction for consumptive use amounts set forth in Article II of the Decree. However, in the case cited by the respondent Laughlin River Tours, Inc. et al. v. Bureau of Reclamation, et al., the United States District Court stated the following: "each of the priorities is interdependent on the other, and the Secretary has broad discretion in meeting the needs of [lower] priorities." The court found that Section 6 of the Boulder Canyon Project Act does not require the Secretary to maximize first priority purposes before establishing criteria to meet lower priorities. The Secretary must operate the Colorado River System in a manner that complies with the water release requirements set forth in Article II of the Decree, but each priority cannot be looked at individually at the expense of ignoring the others.

4: As discussed above, Reclamation agrees that the Secretary not only has broad discretion in making surplus water available for beneficial use in the Lower Division states while meeting treaty obligations to Mexico, but is responsible for doing so. Reclamation's requirement to release water only for reasonable beneficial use pertains only to use within the Lower Division states; we are not responsible for accounting for use of water delivered to Mexico. Reclamation has not avoided ESA consultation by narrowly defining its discretion; in fact it was the process of consulting on on-going operations that finally resulted in a clear definition of the Secretary's discretionary authority. Reclamation believes the scope of this NEPA analysis and concurrent ESA consultation for proposed interim surplus criteria is consistent with the Secretary's discretion and responsibilities as water master of the lower Colorado River.

5: The Secretary's statements, in his December 1999 address, were not intended to be contrary to federal law or treaty. The Defenders of Wildlife definition of surplus is not contained in the Decree. The Secretary recognized, in his statement, the need for greater cooperation with Mexico and for consultation on delta issues in the Joint Declaration. Other mechanisms that the Department of the Interior, and particularly the Bureau of Reclamation, have been working on include the Joint Declaration and the follow-up conference held October 11, 2000, in Washington, D.C. Reclamation is also actively participating in the Fourth Technical Work Group (Delta Task Force) which is a bi-national group working to conduct a joint baseline study of the water and natural resource conditions in the Cienega de Santa Clara and the adjoining lowermost part of the delta of the Colorado River utilizing the resources of these agencies in monitoring, field work, photography and data exchange.

cont'd

assured, through a plan of releases of sufficient instream flows, mitigation, and other measures that additional consumptive use would cause "no net loss" of the environmental benefits that would result if the potential "surplus" were left in the river. The Secretary clearly has the discretion to meet this challenge and the Mexican section of the IBWC has also requested that the environment be considered a user of Colorado River surplus waters. In the spirit of the Joint Declaration, the Secretary must not renege on this gesture of goodwill.

Range of Alternatives Should Have Included Pacific Institute Proposal

6

The range of alternatives is an important piece of the National Environmental Policy Act ("NEPA") - "This section is the heart of the environmental impact statement." 40 C.F.R. § 1502.14. Contrary to Reclamation's conclusion in the DEIS, the Pacific Institute proposal is not within the range of alternatives in the document (2-3). That proposal has been endorsed by 12 groups, including Defenders of Wildlife, representing millions of citizens. Pacific Institute's proposal was submitted specifically to dedicate perennial flows to the delta before declaration of a partial surplus and flood waters to the delta before declaration of a full surplus. No other alternative contains these or any other environmental protection or restoration provisions.

7

This is one of several instances where Reclamation has improperly stated its authority regarding management of the River. The DEIS states that "the delivery of water to or through Mexico would require modification of the Treaty" (2-3). This is incorrect. The Treaty requires the U.S. to deliver a minimum quantity of flows to Mexico; it does not limit the amount of water the U.S. may deliver. In fact, in 1998, the U.S. delivered more than 3 maf over Treaty obligations; in 1984, the U.S. delivered nearly 14 maf over Treaty obligations. See Figure 3.1-6 Salton Sea Restoration Draft EIS/EIR (2000).

8

Colorado River flows that reach the Delta are the result of flood control releases in the U.S. Deliveries to Mexico were greater than 1.7 maf in only half of the years between 1950 and 1998. The alternatives will again halve these odds by 2015 (see Table 3.16-1), as well as reduce the quantities released. The Pacific Institute proposal provides a more reliable source of water to the delta while also providing the Basin states with the predictability of surplus declarations that they seek. As a reasonable alternative that satisfies the purpose and need for surplus criteria as well as the overall purpose of NEPA - "to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man" - the Pacific Institute proposal and its impacts should be studied.

New Information From the Seven States Cannot Be an Alternative

9

On August 5, 2000, Reclamation published a notice of availability of information - the 7 States proposal - related to this DEIS. 65 Fed. Reg. 48531. While it appears in substance to be another alternative, Reclamation has stated that it will analyze the issues and information in it along with all other public comments on the DEIS, and will not extend the comment period. id., despite the fact that it is modeling the proposal. Even though the "information" is the "product of

6: An EIS need not consider an infinite range of alternatives, only reasonable and feasible ones and those reasonably related to the purposes of the project that afford a reasoned choice by the decision maker. The rule of reason shall be utilized in development of a range of alternatives. NEPA does not require a separate analysis of alternatives which are not significantly distinguishable from alternatives actually considered, or which have substantially similar consequences. For these reasons, Reclamation considered the Pacific Institute proposal but eliminated it from further analysis because part of it did not meet the purpose and need of the proposed action and the remainder of the alternative mirrored the Six State's Alternative which was analyzed in depth for the DEIS. Please also refer to the response to Comment 11-2.

7: The determination of guidelines or criteria for the surplus defined in the Treaty is beyond the purpose of and need for interim surplus criteria. Water delivery to Mexico is regulated by the Treaty and various treaty modifications based on consultation between the United States and Mexico. The 1984 and 1998 deliveries were uncontrollable flood flows.

8: Because the domestic elements of the Pacific Institute's proposed interim surplus criteria are similar to, and within the range of, those contained in the alternatives already being analyzed, and because the delivery of additional water to Mexico is beyond the purpose and need for interim surplus criteria, the Pacific Institute's proposal is not analyzed in this FEIS.

9: The stated purpose is to provide greater predictability of when surplus water is and is not available to assist in the Secretary's management of the lower Colorado River for all states and water users. Reclamation has fashioned a new alternative based on the Seven States proposal and believes this alternative does fit within the purpose and need for this action.

significant effort" by the States. Reclamation may not view this new information as an alternative until the proposal's modeling runs and its environmental impacts have been subject to the NEPA processes of public notice and comment.

cont'd

The 7 States proposal as it now reads is not a viable NEPA alternative because it is not within the purpose and need of the interim surplus criteria. The impetus behind the interim criteria has been increased predictability of availability of surplus waters California deems necessary to meet its needs until conservation measures have reduced diversions to 4.4 maf. The 7 States proposal does not provide a starting line by which to measure California's consumption, but given that the state has diverted up to 5.2 maf in recent years and that it expects to conserve a maximum of only 490,000 af by 2016, California will not reach the 4.4 maf goal. Section VIII affirms this position by setting standards for enforcement that are even lower than its expected goals.¹ Only when the surplus criteria is based on California committing to reduce its take of the Colorado River to its 4.4 maf share should any interim surplus criteria be implemented.

10

There are also several aspects of the Guidelines that are simply unacceptable. Section IV *Determination of Lake Mead Operation During the Interim Period* of the 7 States proposal in subsections B, D, & F excessively constrains the Secretary's discretion and must be removed. Allocation of unused apportionment and of surplus has always been entirely within the Secretary's discretion but this proposal attempts to restrict it further than interim criteria require.

The DEIS Contains Numerous Deficiencies Which Only a Supplemental DEIS Can Repair

The California 4.4 Plan Must Be Made Available

11

Regarding the purpose and need of Interim Surplus Criteria, it is well known that the driving force behind their development has been the need to reduce California's reliance on Colorado River water above and beyond its apportionment; the 4.4 Plan is California's plan for doing so. *See* I-22. The Six State, California and Shortage Protection Alternatives all include implementation of the 4.4 Plan in their modeling assumptions (3.3.9.10). Without the 4.4 Plan it is impossible to measure the quantities of water involved. Without the 4.4 Plan it is impossible to gauge California's compliance. However, no version of the 4.4 Plan has been included in the DEIS. The California 4.4 Plan must be made publicly available as quickly as possible, for public review and comment before the FEIS is released.

¹ It bears note that although the chart on b5 Fed. Reg. 48535 expects California will reduce its take by 340,000 af by 2006, 460,000 af by 2011 and 490,000 af by 2016, the chart illustrating the measure of enforcement requires conservation of only 250,000 af by January 1, 2006 and 380,000 af by January 1, 2011 and no goal for 2016.

10. After a review of the criteria in the Working Draft Seven States Proposal, Reclamation formulated the Basin States' Alternative to match that proposal as closely as possible while maintaining consistency with the Law of the River and current operating policy. Reclamation considered the informal discussions with the public during the public review period and comments received on the DEIS.

11: The California Colorado Water Use Plan is not part of this federal action (see response 57-15). The quantities of surplus water made available under each surplus alternative are now detailed in Chapter 2. The specific deliveries to California under the preferred alternative (Basin States) are shown in Figure 3.4-2 and detailed in Attachment H. A draft of the Plan was made available on Coachella Valley Water District's website (www.cvwd.org) prior to the release of the DEIS.

Allowable Uses of Surplus Waters Must Be Limited

- 12 Although not discussed in the DEIS, the allowable beneficial uses of the surplus waters will, to an extent, dictate the future availability of surplus waters and thus warrant comment. For example, under some circumstances a state may dedicate considerable amounts of surplus water to groundwater banking rather than municipal and industrial (M&I) uses, thus lowering reservoir levels to the point where space building or flood control releases are not necessary. Any interim surplus criteria must limit the uses of its water to M&I, particularly in California where the aim of the surplus declaration is to keep the Colorado River Aqueduct full. Likewise, any surplus criteria must limit the declaration of available surplus to that necessary to keep the CRA full to meet MWD's 1.212 maf entitlement, and no more. Thus, the 7 Sizes proposal, IV B 2 a., calling for 1.250 maf for the CRA during a Full Domestic Surplus, must be amended to supply no more than 1.212 maf.²

Affected Environment and Environmental ConsequencesAssumptions

- Reclamation makes three assumptions relating to the operation of the baseline and the alternatives. These assumptions need elaboration before issuance of the Final EIS. The first assumption of implementation of the 4.4 Plan, is discussed above.
- 13 Next, according to the assumptions common to all, Mexico will receive a surplus declaration of 200 kaf only under Lake Mead flood control releases (3.3.9). As stated earlier, the Treaty sets only a minimum delivery requirement, not a maximum. Mexico is eligible to receive surplus waters in years other than flood control releases; to assume otherwise may tie the U.S.'s hands in future negotiations under the Treaty. This DEIS may not *de facto* establish a Mexico surplus declaration trigger.
- 14 Lastly, at the August 15 Hydrologic Modeling Meeting, Reclamation announced that operation of the Yuma Desalting Plant beginning in 2015 is an assumption common to all alternatives. Yet, it was not included in the DEIS and thus there is no clarification as to why it is an assumption. Its omission is doubly troublesome because operation of the plant will have significant environmental impacts on the delta, particularly the Cienega de Santa Clara. Section 3.16.6.1 POTENTIAL EFFECTS TO HABITAT IN MEXICO, summarily concludes that this action will not affect the Cienega without observing that operation of the plant would cut return flows to the

² In addition, Section IV B 1 a., should be amended to read "The amount offset under 2) shall not be less than 100,000 af in 2001 and will be increased by 20,000 af over the Interim Period so as to equal 400,000 af in 2016." When stated this way, it makes more sense, that California will increase the amount of groundwater withdrawals and other options over the 15 years, rather than decrease.

12: Reclamation agrees that the use of surplus water for groundwater recharge when storage in Lake Mead and Lake Powell have been partially depleted increases the risk of subsequent shortages and intensifies the effects on other resources. This is recognized in the derivation of the permitted amounts of surplus water to be made available to the Lower Division states with the lower Lake Mead water level surplus triggers. As can be seen in the surplus water quantities cited in Chapter 2, the surplus water available would be lower at lower Lake Mead water levels. However, such provisions are not included in the Shortage Protection Alternative because that alternative represents an extreme that helps to define the range of options for interim surplus criteria.

13: The purpose of this action, as stated in Section 1.1.1 of this FEIS, is to adopt interim surplus criteria for delivery of surplus water to Arizona, California and Nevada. This proposed action is NOT intended to identify conditions when Mexico may schedule this additional 0.2 maf, as stated in Section 1.1.4 of this FEIS. Delivery of surplus water to Mexico during Lake Mead flood control releases is strictly a modeling assumption as stated in Section 3.3.3.

14: Operation of the Yuma desalting plant was strictly a modeling assumption. It should be noted that the U.S. recognizes that it has an obligation to replace, as appropriate, the bypass flows. The assumptions made herein, for modeling purposes, do not necessarily represent the policy that Reclamation will adopt for replacement of bypass flows. The assumptions made with respect to modeling the bypass flows are intended only to provide a thorough and comprehensive accounting of Lower Basin water supply. The U.S. is exploring options for replacement of the bypass flows, including options that would not require operation of the Yuma Desalting Plant.

Cienega to a third of their current flows while tripling their salinity

Seeds

15

The potentially affected area should not end at the NIB. NEPA directs federal agencies to analyze the effects of proposed actions to the extent that they are reasonably foreseeable regardless of where those impacts may occur. The DEIS includes a transboundary impacts analysis. In accordance with CEQ Guidance on NEPA Analyses for Transboundary Impacts, yet limits the affected area to the NIB between the U.S. and Mexico. This is inconsistent with the scope several of the connected and ongoing actions - the Lower Colorado River Multi-Species Conservation Program and Biological and Conference Opinion on Lower Colorado River Operations and Maintenance - and with the scope of the actual impacts.

Water Quality

16

A more liberal declaration of surplus will lower Lake Mead and adversely affect the water quality of the Colorado River. It is a violation of NEPA simply to assume that the Colorado River salinity control program will maintain the Clean Water Act's water quality criteria. NEPA requires that Reclamation take a hard look at the potential impacts of a project and perform a rigorous analysis based on the best available information.

One author has theorized that a 9 maf drawdown would permanently increase salinity by 96 mg/L below Hoover Dam and by 72 mg/L at Parker and Imperial Dams. This increase would likely offset the impact from any salinity control projects. In addition, any beneficial impacts from a temporary increase in flows would be minor compared to this permanent increase, and would only benefit flows to Parker because the largest diversions are at Parker and Imperial. TDS levels would fall 6 mg/L for each 1 maf released for each three-year average, which requires a 3 maf release over three years and a permanent increase of 32.1 mg/L at Hoover Dam and 23.7 mg/L at Parker and Imperial Dams with a temporary reduction of 6 mg/L. See *Salinity of Colorado River Water, Causes, Consequences, and Remedies*, "Water Strategist" vol. 10, no. 1 (Spring 1996). The Mexican section of the IBWC has also cited the increase in downstream salinity as an impact. (Att. Q.) Reclamation cannot in good faith dismiss these, and other concerns. (3.16.3)

17

While the effects of interim criteria on water quality among the various alternatives may be accounted for in the modeling, the effects of the surplus declarations themselves are not. As a result, this section requires elucidation. For example, the DEIS estimates that 1,478,000 tons of salt will need to be removed from the Colorado River system (3.5-6), but provides no source or rationale for that number. Does this estimation take into account a drawdown of Lake Mead or only current and planned projects?

15. The FEIS includes an analysis of impacts for the Limolrophe Division (from the NIB to the SIB). The area of potential effect described in Section 3.2 is associated with areas in the U.S. The transboundary analysis considers potential effects in Mexico consistent with NEPA and CEQ guidelines. The area considered in Mexico is described fully in Section 3.16.

16: The seven state Colorado River Basin Salinity Control Forum, in cooperation with Reclamation, USDA, BLM, the US Fish and Wildlife Service and EPA has, since 1972, been overseeing the plan of implementation to maintain the salinity at or below the adopted criteria. Maintenance of the criteria is the result of rigorous analyses. The plan is reviewed every three years and approved by EPA.

17. The basis for the 1,478,000 tons of salt control is described in the "1999 Review - Water Quality Standards for Salinity Control Colorado River System" prepared by the Forum.

Transboundary Impacts Analysis is Flawed

18 Existence of a political boundary has provided opportunity to muddy the extent of the Secretary's discretion in managing the Lower Colorado River. Just as in the section dismissing the Pacific Institute proposal, the DEIS contains misleading statements regarding water deliveries to Mexico and flows beyond the border. For example, the DEIS avers that the reductions in Colorado River flows that have adversely affected the delta ecosystem "have been instituted through an international treaty." (3 16-13). As explained above, the Treaty sets minimum requirements for deliveries to Mexico; the DEIS should clarify that reductions in historic flow to the delta are the result U.S. actions.

19 Further, the claim that "potential effects on Mexico's resources cannot be specifically determined due to the uncertainty of water use once it flows across the NIB into Mexico," (3 16-1), is simply untrue. Morelos Dam, to which the U.S. is obligated to deliver a portion of Mexico's Treaty waters, is below the NIB. Twenty-three miles from the NIB to the SIB is bordered by the U.S. By managing and bordering the river below the NIB, the U.S. cannot claim ignorance once water crosses the NIB. In fact, Reclamation does possess data concerning the use of water in Mexico:

relatively little of the water in excess of the 1.5 to 1.7 MAFY Treaty allocation is diverted for irrigation. Diversions to irrigation canals below Morelos Dam exceeded 1.7 MAFY in only 14 of the 24 years since 1950 in which deliveries to Mexico were greater than 1.7 MAFY. In those 14 years, an average of about 523,000 AFY was diverted to irrigation canals. Therefore, on average, about 10 percent of the flood flows were diverted for irrigation in those 14 years.

20 Salton Sea Restoration Draft EIS/EIR (Reclamation 2006) at 3-23. In other words, in 24 of 46 years excess flows have reached Morelos Dam and in 14 of those 24 years Mexico diverted a small fraction of that water. In all of those 24 years Mexico sent flows to the delta and in the other 24 years no flows reached the delta. Interim surplus criteria will ensure that excess flows reach the delta even more sporadically, if at all.

Sensitive Species

21 We were encouraged that Reclamation included an analysis of transboundary impacts in the DEIS. However, our hopes that Reclamation would initiate research efforts to combat their earlier recognition of the sparse ecological and biological data on the vaquita and totoaba were dashed when we saw that the most of the analysis of the vaquita and totoaba were taken straight from the Description and Assessment of Operations, Maintenance, and Sensitive Species of the Lower Colorado River (Reclamation 1996). The deficiencies from that analysis have not been remedied and carry the same lack of research and information from 1996 into 2000. This is especially disappointing because Reclamation already knows its ongoing activities in the Lower Colorado River may affect the totoaba and is unsure about their effects on the vaquita. The

18: Comment noted. Section 3 16 6 1 has been revised to state that "reductions have been instituted while meeting the requirements of an international treaty and the diversion and use of such Treaty water is solely of Mexico's discretion." At least since execution of the Treaty, it is incorrect to state that responsibility for reductions of flows to the Colorado River delta lies with United States interests alone.

19: Section 3 16 has been revised to reflect available information at NIB. Mexico retains control at Morelos Dam as to what is done with the water that arrives there. However, excess water diverted may not be consumptively used in Mexico, but released back to the Rio Hardy and Colorado River as waste and/or irrigation drainage. No data is available to Reclamation on the amount of these wasteway and drainage return flows, so final disposition of diverted water is not known by Reclamation.

20: See above response. Note that the EIS presents information with regard to Colorado River flows to Mexico under baseline conditions and the alternatives. Note also that additional information has been added to the discussion of these flows in section 3 3 4 5 4 entitled "River Flows between Imperial Dam and Morelos Dam" of the FEIS.

21: See response to Comment 10-8.

cont'd | world's rarest marine mammal

Moreover, there are numerous references in the text for which complete citations are not provided or for which basic information has been overlooked. Standing alone, these omissions are not particularly serious; however, in the context of full disclosure and rigorous investigation they raise questions about the quality of the workmanship. Omissions coupled with conclusions not supported by existing data raise real concerns about the product. Please amend the following pages:

- (3 16-16)
- 22 | • the vaquita is listed as endangered by the U.S. government, 50 Fed Reg. 1956 (January 9, 1985); the Mexican government, Normas Oficiales Mexicanas NOM-059-ECOL-1994; and "critically endangered" by the IUCN;
- 23 | • (Taylor and Gerrodette 1993) is not in References Cited.
- 24 | • (Barlow et al. in press) should read (Barlow et al. 1997) and the reference should reflect that change. The title should read "First Estimates" and contain an updated citation;
- (3 16-17)
- 25 | • (Rojas-Bracho) is not in References Cited, and with no title or date, it is hard to determine its relevance;
- 26 | • impact analysis for the vaquita does not incorporate more recent research published in volume 15 of Marine Mammal Science;
- 27 | • the totoaba is listed as endangered by the U.S. government, 44 Fed Reg. 29678 (May 21, 1979) and the Mexican government, Normas Oficiales Mexicanas NOM-059-ECOL-1994;
- 28 | • the analysis of effects on the totoaba must acknowledge that Reclamation has already found that its operations and activities in the Lower Colorado River may affect the totoaba;
- 29 | • the statement that the totoaba "was included in this assessment at the suggestion of the Service and a number of public stakeholders" should be removed. This appears to be taken from the Biological Assessment (1996) and is not applicable here;
- (3 16-18)
- 30 | • status of a recovery plan for the southwestern willow flycatcher should reflect any changes since 1996;

22: This information is included in Reclamation's analysis

23: This correction has been made

24: This citation has been corrected

25: This citation has been added

26: Recent research for the vaquita has been incorporated in the analysis

27: The information has been cited in the analysis for the totoaba

28: The analysis recognizes effects of past, current and reasonably foreseeable operations on the totoaba as part of the baseline condition

29: This statement has been removed. Reclamation has received input supporting and opposing analysis of impacts on the totoaba in Mexico

30: The recent completion of a recovery plan for the southwestern willow flycatcher is noted in the analysis, and is limited to activities in the United States

- 31 (116-24)
• similar to above, status of recovery actions for the Yuma clapper rail should reflect any changes since 1994.

31: The analysis includes an update for the Yuma clapper rail

- 32 (118-17)
• the yellow billed cuckoo has been petitioned for listing under the ESA and the FWS has published a 90 day finding that listing may be warranted

32: This information on the yellow-billed cuckoo is included

Cumulative Impacts

- 33 The DEIS states that current circumstances and expected future actions have been "included in system modeling" and thus cumulative impacts have been "incorporated into modeling" (4-1). Impacts from actions such as the California 4-4 Plan (canal linings, intrastate transfers, groundwater banking, etc.). Interstate transfers through off-stream banking, the uses of surplus water and day-to-day operations and maintenance activities along the lower Colorado River are not included in the modeling. Environmental variables - fish and wildlife, endangered species, native vegetation - are not included in the modeling and must be described in the cumulative impacts section of the DEIS.

33: As discussed in the EIS, the potential effects on system conditions (including reservoir elevations and river flows) were determined by modeling potential future conditions under baseline conditions and each of the alternatives. To the extent possible, expected future actions that would affect system conditions were included in system conditions modeling and the impacts of these actions are therefore accounted for in the resource analyses in Chapter 3 of the EIS. In addition, implementation of the LCRMSCP is expected to prevent adverse cumulative effects to the biological resources of the lower Colorado River. The LCRMSCP is being developed to mitigate the adverse effects on resources from current and future water diversions and power production with the cooperation of federal, state, Tribal and other public and private stakeholders. The LCRMSCP will include the creation and enhancement of habitat and augmentation of native fish species populations from Lake Mead to the SIB. The LCRMSCP is evaluating the appropriate amount of acreage for restoration. Currently, acreage estimates range from a low of 3,000 acres to a high of 80,000 acres of riparian woodland, marsh, open water and mesquite habitat.

- 34 Cumulative impact is the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.7. See also Considering Cumulative Effects Under the National Environmental Policy Act (CEQ 1997). Reclamation has found that current operations along the LCR may affect the endangered totoaba, citing the lack of freshwater flows to the delta as a factor. See Description and Assessment of the Operations, Maintenance and Sensitive Species of the Lower Colorado River (Reclamation 1996). Offstream banking, as well as the interim criteria, will reduce the amount of and probability of freshwater flows to the delta. See Biological Assessment for Proposed Rule for Offstream Storage of Colorado River Water and Delivery of Intentionally Created Limited Apportionment in the Lower Division States (Reclamation 1998) at Table IV-3. There is no attempt to accumulate these environmental effects in the DEIS. Environmental values are not factors in Reclamation's hydrological models, thus this lack of cumulative impacts analysis is pervasive in the DEIS.

Section 4.2 has been modified and Reclamation believes that it has appropriately addressed potential cumulative effects of the proposed action.

34: See response to Comment 10-9

- 35 *Mitigation*
The direct, indirect and cumulative impacts to sensitive species, to native habitat, to water quality, and to the Lower Colorado River ecosystem as a whole is significant. According to CEQ guidance, a proposed action with significant effects must consider all of its effects on the environment, whether or not significant, and mitigation measures covering the range of impacts must be developed. See 40 C.F.R. §§ 1502.14(f), 1502.16(h), 1508.14. Furthermore, all relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies, and thus would

35: No significant impacts have been identified that require specific mitigation. However, Section 3.17 has been added to the FEIS to discuss environmental commitments that Reclamation would undertake upon adoption of interim surplus criteria through the Secretary's Record of Decision.

cont'd

not be committed as part of the RODs of these agencies. 40 C.F.R. §§ 1502.16(h), 1505.2(c). There is no discussion of mitigation in the Draft EIS; mitigation measures must be included in the Final EIS.

Compliance with the Endangered Species Act

36

The scope of the ESA Section 7 consultation on the Interim Surplus Criteria is of enormous importance yet contains several flaws. First, section 5.3.3 must be amended to read that the action area "will be within the 100-year floodplain and Lakes Mead, Mohave and Havasu to full pool elevations of the Colorado River and downstream to the Gulf of California" (5-2) (emphasized text added). In this DEIS Reclamation identifies the potential for impacts to the vaquita, totoaba, southwestern willow flycatcher and Yuma clapper rail from the decrease in frequency and amount of freshwater flows to the delta. Therefore, in an ESA consultation where the "action area" includes "all areas to be affected directly or indirectly by the Federal action and not merely in the immediate area involved in the action," 50 C.F.R. § 402.02 (emphasis added) and the Colorado River delta is clearly affected by the proposed action, the scope of analysis must include the reach of the river and its floodplain downstream to the Gulf.

37

In addition, section 5.3.3 on ESA compliance refers only to the U.S. Fish and Wildlife Service in caption and text, implying that the National Marine Fisheries Service, the agency with jurisdiction over the vaquita and totoaba, have not been contacted regarding this consultation. Communications with NMFS confirm this. See letter from Rodney R. McInnis, Acting Regional Administrator, NMFS to David Hogan, Center for Biological Diversity of July 13, 2000 ("the Bureau of Reclamation has not contacted NMFS regarding informal or formal ESA consultation on the Department of Interior's Colorado River Interim Surplus Criteria") (Attached). This is in violation of the ESA and contrary to a memo indicated that this consultation has occurred and should continue. See Memorandum from John Lesky, Solicitor to Eluid Martinez, Commissioner, of August 14, 2000. We hope that the August 14 memo is more indicative of the consultation that is occurring on the proposed action and that consultation with both FWS and NMFS continues.

38

In conclusion, section 3.16.6.1, POTENTIAL EFFECTS TO HABITAT IN MEXICO, is an argument against rather than for, the implementation of surplus criteria. The second and fourth full paragraphs at 3.16-13 claim that "the potential magnitude of these excess flows is not affected by interim surplus criteria" because "all alternatives plus baseline indicate a decrease in frequency of flood control releases and flow amounts." However, two paragraphs later the analysis concludes "[s]pecial status species that utilize the riparian habitat along the Mexican reach of the Colorado River could be affected by the decrease in frequency of flood control releases and amounts of flow past Morelos Dam." Since declaration of a surplus is discretionary with the Secretary, he must ensure that the adverse impacts to endangered species from any type of surplus declaration are avoided. When read in conjunction with graphs showing the higher probabilities under the baseline and flood control alternative, this also suggests that the environmental harms of the other alternatives are significant and outweigh the benefits of any

36: The action area extends to the Sea of Cortez. Reclamation is consulting with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service for the delta area of Mexico and effects of the interim surplus criteria on species that occur in both the U.S. and Mexico or only in Mexico are discussed in Section 3.16. Transboundary Impacts.

37: Reclamation is informally consulting with NMFS, as described in Section 5.3.5 of the FEIS. Reclamation's assessment of effects on the vaquita and totoaba in Mexico is also included in Section 3.16.6 of the FEIS. The August 14 memo is included in Attachment S.

38: As indicated by response to Comment 11-36 above, the analysis of effects to special status species in Section 3.16 has been revised. Reclamation has concluded that implementation of interim surplus criteria may affect, but is unlikely to adversely, some species and is consulting with the U.S. Fish and Wildlife Service and NMFS, as required by Section 7 of the ESA.

COMMENT LETTER

cont'd

interim criteria.

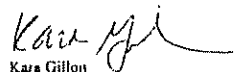
Recommendations

39

In sum, the DEIS underestimates the potential environmental impacts of interim surplus criteria. By narrowly defining the scope of the Secretary's discretion in managing the Lower Colorado, Reclamation has effectively diminished the area of potential impacts and the extent of impacts to water quality and sensitive species. Smaller geographic and ecological scope has, in turn, subjugated the significant environmental and social impact of the proposed criteria. As a result, there is no apparent need for environmental mitigation or for an environmental preferable alternative. The quality of the draft EIS suffers as these transgressions accrue; only a draft supplemental EIS can remedy these flaws.

39 A comprehensive discussion of this issue is in the end of the next section. Reclamation does not believe that a Supplemental DEIS is required. We have expanded the area of potential effect and revised analyses of water quality and sensitive species impacts. A preferred alternative and environmental commitments are identified in the FEIS. The ROD will discuss the environmentally preferred alternative.

Sincerely,



Kara Gillon
Associate Counsel

William J. Snape, III
Vice President for Law and Litigation

Attachment

11

COMMENT LETTER



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

July 13, 2000

Mr. David Hogan
Center for Biological Diversity
P.O. Box 678
Santa Ysabel, California 92070

Dear Mr. Hogan:

This letter is in response to the Center for Biological Diversity request under the Freedom of Information Act (FOIA), dated June 5, 2000, for documents relating to an informal or formal Endangered Species Act (ESA) consultation which may have occurred between the Bureau of Reclamation and the National Marine Fisheries Service (NMFS) with regard to the Department of the Interior's Colorado River Interim Surplus Criteria.

I understand that you spoke with Ms. Deanna Harwood, staff attorney in the Office of General Counsel, National Oceanic and Atmospheric Administration (NOAA) on July 7, 2000. Ms. Harwood and I appreciate your acceptance of our request for additional time in responding to your request. It is our understanding from that conversation that your interest is limited to whether the Bureau of Reclamation had initiated informal or formal ESA consultation with NMFS. As the Bureau of Reclamation has not contacted NMFS regarding informal or formal ESA consultation on the Department of Interior's Colorado River Interim Surplus Criteria, we have no documents responsive to your request.

Although this does not constitute a denial of your request because there were no records available or withheld, you may appeal this determination within 30 days of receipt of this letter. Appeals shall be addressed to the Office of the General Counsel, Room 5882, U.S. Department of Commerce, 14th Street and Constitution Avenue, N.W., Washington, D.C. 20230, and prominently mark your letter and the outside envelope, "FOIA Appeal." Your appeal should state the reasons why you believe this determination was in error. Attach a copy of your original request and a copy of this letter to your appeal.

Sincerely,

Rodney R. McInnis
Acting Regional Administrator

cc: Deanna Harwood

Printed on Recycled Paper





September 8, 2000

Regional Director
Lower Colorado Region
Attention: Jayne Harkins (LC-4600)
Bureau of Reclamation
PO Box 61470
Boulder City Nevada 89006 1470

P/OA/CDD
4600

Via fax (702) 293-8042

Re: Colorado River Interim Surplus Criteria DEIS

Dear Ms. Harkins:

The Pacific Institute for Studies in Development, Environment, and Security respectfully submits the following comments on the Colorado River Interim Surplus Criteria draft Environmental Impact Statement (DEIS). These comments will also be sent to you via regular and electronic mail. The Pacific Institute is an independent, non-partisan, non-profit center in Oakland, California, created in 1987 to conduct research and policy analysis in the areas of environment, sustainable development, and international security. The Institute has actively participated in the development of the Interim Surplus Criteria for more than a year, via formal scoping comments and through informal discussions and workshops. The Pacific Institute also submitted a set of "Environmental Interim Surplus Criteria" for consideration in the DEIS.

The Pacific Institute welcomes the effort to develop interim surplus criteria. We believe that facilitating the implementation of plans and projects to reduce California's use of Colorado River water to its legal apportionment is a worthy objective, and that interim criteria are a reasonable means of achieving this objective. The Institute does not believe, however, that meeting this objective should come at the cost of further harm to the environment.

In the attached comments, the Pacific Institute identifies several major flaws in the DEIS. These include: the failure to analyze the impacts of the 7 State Guidelines (likely to be the preferred alternative); the scope of the document; several of the modeling assumptions; the selection of the 75R trigger as a baseline instead of the flood control trigger; the absence of an adequate cumulative impacts assessment; and a general disregard for the Secretary's responsibility to "protect and enhance the environmental resources of the basin."

The general effect of these deficiencies is to understate the potential environmental impacts of interim surplus criteria. The Pacific Institute concludes that the DEIS is inadequate and should be formally revised and reissued for public comment as a Supplemental Draft Environmental Impact Statement. The deficiencies highlighted in the attached comments are of sufficient magnitude that they preclude a reasonable assessment of the potential environmental impacts associated with the adoption of interim surplus criteria.

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Pacific Institute comments
September 8, 2009
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More broadly, the Pacific Institute believes that the potential benefits generated by interim surplus criteria do not warrant their environmental costs. These costs could be substantial. By the year 2015, the flood control alternative would generate a 17% greater probability of flows reaching the delta than would the six states' plan, itself likely to generate more flows than the 7 state plan. Because the frequency and magnitude of such flows are closely tied to the reproduction and health of the native riparian vegetation in the region, and indirectly to the myriad of threatened and endangered species that depend on this habitat, this projected reduction in flows is significant. The projected benefits of the interim surplus criteria are less clear. Interior is promoting the surplus criteria as necessary to reduce California's consumption of Colorado River water. Yet California's plan to reduce its use, even under the most optimistic of projections, would not meet the target conservation objective. And California continues to demand additional water, above and beyond that outlined within the 7 State Plan. At the August 16th AOP meeting, California requested a full surplus declaration for calendar year 2001, including 150,000 acre-feet for agricultural demands, justifying this request as a "transition" into the interim period. The absence of a real "44 Plan," combined with California's continued failure to reduce its use, suggest that California will not markedly reduce its use in the next fifteen years. In light of these substantial costs and tentative benefits, there is little incentive to condone increased threats to environmental values along the lower Colorado River.

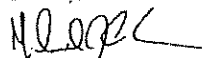
The Secretary of the Interior has stated that surplus flows must be determined and allocated with *no net loss* of environmental benefits. According to the DEIS, the proxy for the 7 State Plan would likely generate a net loss of such benefits. Reclamation should identify a reasonable mechanism for mitigating the loss of such benefits, whether through the releases suggested by the Environmental Criteria or via another mechanism for protecting environmental benefits.

Overall, the Pacific Institute recommends that Reclamation issue a supplemental DEIS that:

1. defines and assesses the potential environmental impacts of the 7 State Guidelines
2. expands the scope to encompass the limitrophe, the delta in Mexico, and the Upper Gulf
3. revises the modeling assumptions as described in the attached comments
4. uses the flood control alternative as the baseline
5. adequately accounts for cumulative impacts
6. assesses the Environmental Interim Surplus Criteria

Thank you for the opportunity to participate in this important process. Please do not hesitate to contact me if you wish to discuss any of the points made in the attached comments.

Sincerely,



Michael Cohen
Research Associate

enclosure

Pacific Institute Comments
on the

Colorado River
Interim Surplus Criteria
Draft Environmental Impact Statement

A report of the

PACIFIC INSTITUTE FOR STUDIES IN
DEVELOPMENT, ENVIRONMENT AND SECURITY

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OVERVIEW

California currently uses about 18% more Colorado River water than its normal entitlement. Until recently, this excess came from the unused apportionments of Arizona and Nevada, the other two states in the lower Colorado River basin. As Arizona and Nevada continue to increase their own use, the federal government and the other basin states have pressured California to reduce its use down to its legal entitlement. In response, California drafted a plan to reduce its use but claims that over the next 15 years it will require a reliable supply of additional "surplus" water from the Colorado River to implement this plan. The Department of the Interior and the other basin states have decided that the benefit of implementing California's plan outweighs the risks of increased shortage and other costs associated with drawing down the elevation of Lake Powell and Lake Mead, and so agreed to create temporary rules, known as interim surplus criteria, to allow California to use additional water. Interior claims that this long-term benefit outweighs the potential short-term costs to the environment, such as reduced flows to the Colorado River delta.

The Bureau of Reclamation published a Notice of Intent to develop surplus criteria for Colorado River management on May 18, 1999 (64 Fed Reg 27008). On July 7, 2000, the U.S. Bureau of Reclamation issued a Draft Environmental Impact Statement (DEIS) to analyze the potential environmental impacts of adopting specific interim criteria (65 Fed Reg 42028). On August 8, 2000, Reclamation published a new set of rules, known as the 7 States' proposed interim surplus guidelines (65 Fed Reg 48511).

The adoption of surplus criteria will impact several related Colorado River issues, including the frequency and magnitude of "space-building" and reservoir spill (flood) flows, the availability of water for the delta region, habitat availability and quality for federally listed species, off-stream storage, the lower Colorado River MSCP, the availability of surplus flows for Mexico, recreational uses along Lake Powell and Lake Mead, water quality issues, power generation, the probability of shortage conditions on the river, and others. The Pacific Institute's comments focus on the scope of the DEIS, potential impacts to habitat along the Colorado River downstream of Lake Mohave, modeling assumptions, and several procedural issues.

The Pacific Institute identifies several significant deficiencies in the DEIS:

1. The DEIS does not include the 7 State Plan. The DEIS fails to analyze the potential impacts of the 7 State Plan, which is likely to be the preferred alternative. Comments by various basin state representatives at the August 16th Annual Operating Plan (AOP) meeting in Las Vegas indicated that the basin states already assume that the 7 State Plan will be adopted. Yet the DEIS uses a different plan as a proxy for the 7 State Plan, justifying its decision because a "preliminary review" of this plan suggests that it lies "within the range of alternatives and impacts analyzed in the DEIS." A preliminary review by the Pacific Institute indicates that the new, unanalyzed plan would increase Colorado River depletions, exacerbating the potential impacts relative to the proxy plan and to the baseline. The Pacific Institute recommends that these impacts be modeled and analyzed.
2. Scope. The scope of the DEIS is inadequate. The DEIS does not analyze the full range of potential impacts within the U.S., arbitrarily excluding the limitrophe division of the Colorado River. Additionally, the discussion of transboundary environmental impacts are cursory and

1: Reclamation agrees and has modeled and analyzed the Basin State Alternative for this FEIS. It should be noted that this alternative has been selected as the preferred alternative.

2. The area of potential effect has been expanded to include consideration of the Colorado River 100-year floodplain to the SIB. The Transboundary analysis has been modified in the FEIS and Reclamation believes this section appropriately assesses potential effects in Mexico.

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inadequate. The DEIS fails to acknowledge the potential impacts to the Upper Gulf of California, the listed species found there, and the socioeconomic values dependent upon flows to the Gulf. The Pacific Institute recommends that the scope be extended to encompass the estuary at the mouth of the Upper Gulf and the full floodplain in the Colorado River delta.

3 **Modeling Assumptions.** The model is based on a series of assumptions that distort the results used to predict potential environmental impacts. These results understate the magnitude of potential impacts to the environmental resources within the affected area. The Pacific Institute recommends that the assumptions be refined as described in the following:

4 **Baseline.** The selection of a liberal baseline, based on the 1997 surplus declaration, rather than the more conservative flood control baseline used for the 1998, 1999, and 2000 surplus declarations, is inappropriate. The use of this arbitrary liberal baseline diminishes the projected impacts of interim surplus criteria, effectively understating the magnitude of the action. The Pacific Institute recommends that the flood control guidelines be used as the baseline.

5 **Cumulative Impacts.** The DEIS inadequately accounts for cumulative impacts, and then discounts these impacts, in violation of NEPA. The Pacific Institute recommends that the DEIS list and describe the full range of federal and non-federal actions that impact the affected area and account for these cumulative impacts.

6 **Environmental Responsibilities.** Long term Colorado River system management objectives require the Secretary to "protect and enhance the environmental resources of the basin." The adoption of the interim surplus criteria, particularly the 7 State Plan, would not satisfy this objective. An alternative submitted to Interior by the Pacific Institute and nine environmental organizations would meet both the stated objectives for interim surplus criteria and the Secretary's broader environmental trust responsibilities. The Pacific Institute recommends that Reclamation analyze the potential impacts of this alternative in the DEIS.

7 The general effect of the above deficiencies is to understate the potential environmental impacts of interim surplus criteria. The Pacific Institute concludes that the DEIS is inadequate and should be formally revised and reissued for public comment as a Supplemental Draft Environmental Impact Statement. The deficiencies highlighted in these comments are of sufficient magnitude that they preclude a reasonable assessment of the potential environmental impacts associated with the adoption of interim surplus criteria.

8 More broadly, the Pacific Institute believes that the purported benefits generated by interim surplus criteria do not warrant their environmental costs. These costs could be substantial. By the year 2015 the flood control alternative would generate a 17% greater probability of flows reaching the delta than would the six states' plan, itself likely to generate more flows than the 7 state plan. Because the frequency and magnitude of such flows are closely tied to the reproduction and health of the native riparian vegetation in the region, and indirectly to the myriad of threatened and endangered species that depend on this habitat, this projected reduction in flows is significant. The projected benefits of the interim surplus criteria are less clear. Interior is promoting the surplus criteria as necessary to reduce California's consumption of Colorado River water. Yet California's plan to reduce its use, even under the most optimistic of projections, would not meet the target conservation objective. And California continues to demand additional water, above and beyond that outlined within the 7 State Plan. At the August

3: Section 3.16.5.3 has been added to the FEIS to provide information on the general potential impacts that the implementation of interim surplus criteria may have on the frequency of excess flows to Mexico as well as the potential resultant impacts to groundwater recharge and salinity South of the SIB. Reclamation does not concur with the suggestions presented under the headings - "Baseline", "Cumulative Impacts" and "Environmental Responsibilities." Reclamation's rationale for using the analyses criteria and type of analysis presented in the DEIS and FEIS are explained and detailed in these documents. See responses below.

4 See response to Comment 57-11.

5 Section 4.2 has been modified and Reclamation believes that it has appropriately addressed potential cumulative effects of the proposed action.

6: An EIS need not consider an infinite range of alternatives, only reasonable and feasible ones and those reasonably related to the purposes of the project that afford a reasoned choice by the decision maker. The rule of reason shall be utilized in development of a range of alternatives. NEPA does not require a separate analysis of alternatives which are not significantly distinguishable from alternatives actually considered, or which have substantially similar consequences. For these reasons Reclamation considered the Pacific Institute alternative but eliminated it from further analysis because part of it did not meet the purpose and need of the proposed action and the remainder of the alternative mirrored the Six States Alternative which was analyzed in depth.

7: Reclamation disagrees with the commenter's opinion that the DEIS is inadequate and should be revised and a supplemental DEIS reissued. Reclamation has followed regulations implementing NEPA and it is accepted practice to update, refine, clarify and make factual corrections to the content and analyses in the EIS resulting from improved data control, public comments, coordination with interested parties and incorporate these changes into the document and circulate it as a FEIS.

8: Comment noted. Section 3.16.6 of the FEIS has been expanded to provide more information on the potential effects of changes in excess flows on habitat and threatened or endangered species in Mexico for each of the alternatives.

9: Comment noted. Please refer to the introduction to Volume III regarding the proposed action and its relationship to California's program to reduce its dependence on surplus water.

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cont'd

16th AOP meeting. California requested a full surplus declaration for calendar year 2001, including 150,000 acre-feet for agricultural demands, justifying this request as a "transition" into the interim period. The absence of a real "4.4 Plan," combined with California's continued failure to reduce its use, suggest that California will not markedly reduce its use in the next fifteen years. In light of these substantial costs and tentative benefits, there is little incentive to condone increased threats to environmental values along the lower Colorado River.

BACKGROUND

On July 7, 2000, the Bureau of Reclamation released the draft environmental impact statement (DEIS) for the adoption of interim surplus criteria for the Colorado River. These surplus criteria are meant to establish specific guidelines to assist the Secretary of the Interior's determination whether to declare a surplus condition for the river, and to facilitate California's implementation of measures to reduce the state's use of Colorado River water from its current use of about 5.2 million acre-feet¹ (MAF)/year to its legal entitlement of 4.4 MAF.

Under a complex institutional arrangement known as the Law of the River, Arizona, California and Nevada are entitled to use 7.5 MAF of water from the Colorado River each year. Of this amount, California is apportioned 4.4 MAF. Most (3.85 MAF) of the rights to California's water belong to agricultural users, leaving only 0.55 MAF for the 17 million urban users in the greater L.A. and San Diego metropolitan area. Since 1961, California has used an annual average of almost 5.0 MAF, supplementing its entitlement with the unused apportionment of Arizona and Nevada. In recent years, however, Arizona and Nevada have consumed most of their respective apportionments, decreasing the availability of unused water for California.

In the past several years, California has consumed more than 5.2 MAF/year, largely because the Metropolitan Water District of Southern California (MWD) has conveyed nearly 1.29 MAF/year through its Colorado River Aqueduct. The Secretary of the Interior and the other six basin states have pressured California to reduce its demands on Colorado River water down to the state's legal entitlement of 4.4 MAF. In response to these pressures, the state has drafted the California Colorado River Water Use Plan (available at <http://crb.water.ca.gov/reports.htm>), a loose framework of conservation efforts: groundwater storage, offstream banking, rural-to-urban water transfers, and other programs and projects to meet the agricultural and urban water needs of the state while reducing consumption. Originally, this water use plan was called the "4.4 Plan," but because it only projects 0.49 MAF of savings in the next 15 years and 0.54 MAF of savings in the next 25 years, it was given its longer but less ambitious title.

Partly in response to California's demand for additional water as it drafted the California Plan and partly because of very high reservoir levels and unusually wet hydrologic conditions, the Secretary declared a surplus for the river each year from 1996 – 2000. Authority for the Secretary to declare a surplus stems from the *Arizona v. California* Supreme Court Decree (1964). A surplus condition allows the lower basin states to consume water beyond their normal apportionment of 7.5 MAF: California is entitled to 50% of this surplus, Arizona 46% and Nevada 4%; a state may also use the another state's unused apportionment. The Secretary

¹ An acre-foot is 325,851 gallons of water, approximately the amount two families of four use in a year. The estimated annual flow of the Colorado River since 1906 is about 15 MAF.

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declared these surpluses through the Annual Operating Plan (AOP) process, with the assistance of representatives of the seven Colorado River basin states (Arizona, California, and Nevada in the Lower Basin and Colorado, New Mexico, Utah, and Wyoming in the Upper Basin) tribal representatives, water users, members of the academic and scientific communities, environmental organizations, contractors for hydroelectric power, and the general public.

PARTICIPATION OF THE PACIFIC INSTITUTE

On June 28, 1999, the Pacific Institute submitted comments on the scope of the National Environmental Protection Act (NEPA) process and the DEIS, urging the inclusion of an assessment of transboundary impacts, among other concerns. In November 1999, Pacific Institute staff met with a senior Reclamation official to discuss our concerns regarding the potential environmental impacts of interim surplus criteria. As a result of this conversation, the Institute coordinated a meeting in Las Vegas on December 16th between representatives of several environmental groups and senior Reclamation staff. Among the concerns voiced at the meeting was the potential for surplus criteria to lower the elevation of Lake Mead, decreasing the frequency and magnitude of the space-building and flood release flows that sustain native riparian habitat along the lower Colorado River, especially in the river's delta in Mexico. Upon Reclamation's request, the Pacific Institute offered to draft a set of interim surplus criteria that reflected the interests and concerns of the environmental community.

10: Comment noted

In response to the concerns voiced by environmental groups at the meeting, the Secretary of the Interior added language to his keynote address on December 17, 1999 to the Colorado River Water Users Association conference. The Secretary stated that surpluses must be determined and allocated with *no net loss* of environmental benefits (emphasis added), setting an important environmental baseline for interim surplus criteria. The Pacific Institute incorporated the Secretary's environmental baseline into the "Environmental Interim Surplus Criteria for the Colorado River" (DEIS Attachment F) that was drafted jointly with American Rivers, Defenders of Wildlife, Environmental Defense, Friends of Arizona Rivers, Glen Canyon Institute, Grand Canyon Trust, Land and Water Fund of the Rockies, Sierra Club Colorado River Task Force, and the Sonoran Institute, as well as several members of the academic community. These criteria were designed to satisfy the dual objectives of improving the predictability of surplus conditions for water users and facilitating California's reduction in the use of Colorado River water, without causing further harm to the environment. In effect, they integrated mitigation measures into the criteria themselves.

INTERIOR AND THE DELTA

The Department of the Interior has publicly recognized the importance of the Colorado River delta. The Secretary's keynote address reflected this recognition. On May 5, at the Law of the Colorado River conference in Tucson, the Deputy Secretary said that the delta is an issue whose time has come. Less than two weeks later, Interior and its counterpart agency in Mexico, SEMARNAP, signed the Joint Declaration to Enhance Cooperation in the Colorado River Delta. In the Joint Declaration, Interior pledges to "strengthen cooperative action and mechanisms, to improve and conserve the natural and cultural resources of the Colorado River Delta, including the river and associate wetland habitats" and "develop strategies of environmental sustainability" among other actions.

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In a opinion piece that appeared in the *Los Angeles Times* on August 25th the Deputy Secretary wrote of the CALFED process that

It's also about restoring the watersheds that have borne the effects of water manipulations that were undertaken in a different era, an era that paid little regard to the impact that damming, depleting or diverting rivers and streams would have on downstream water quality, fish and wildlife resources and other environmental values.

These words could have been written about the Colorado River. Yet, while the CALFED plan recognizes and allocates water for environmental needs, the interim surplus criteria do not.

THE COLORADO RIVER DELTA

Historically, prior to the construction of dams, diversions, and other reclamation projects, millions of acre-feet of Colorado River water flowed every year through the Colorado River delta and into the Upper Gulf of California, supporting tremendous levels of biological productivity and diversity. The delta has been degraded as human demands have dramatically reduced the amount of water reaching it. Except for years with unusually high run-off, virtually the entire flow of the Colorado is now captured and used before reaching the river's mouth. However, even without the historic flows, the remnants of the delta and Upper Gulf still comprise the largest and most critical desert wetland in North America, as well as one of the world's most diverse and productive marine ecosystems. In recent years, flood release flows from upstream dams have prompted the re-emergence of ecologically valuable riparian habitat and have been strongly correlated with a rise in the shrimp catch in the Upper Gulf, an indication of the renewed viability of an important estuary. In 1993, Mexico affirmed the importance of the region and designated it a Biosphere Reserve, which has since received international recognition.

11 At its upper reaches, the delta is dominated by native vegetation such as cottonwoods and willows, offering more than twice the amount of native riparian habitat found in the entire reach of the Colorado River in the United States from Hoover Dam to the Mexican border. The native riparian vegetation of the lower Colorado River and the delta evolved in response to occasional flood events; such flows must be replicated to ensure the continued viability of these species. The middle extent of the delta contains extensive backwaters filled by occasional floods, providing valuable wetland habitat for migratory birds as well as a myriad of local species. The delta supports several species listed by the U.S. Fish & Wildlife Service, including southwestern willow flycatchers (*Empidonax traillii eximius*), Yuma clapper rails (*Rallus longirostris yumanensis*), totoaba (*Totoaba macdonaldi*) and desert pupfish (*Cyprinodon macularius*), while the river's estuary is home to the vaquita porpoise (*Phocoena sinuata*), the world's most endangered marine mammal.

12 Currently, the Colorado River delta is largely dependent on flood control releases from Hoover Dam. These waters are released primarily from October through February to provide flood control storage space. It is important to distinguish between surplus flows, which are released upon declaration of a "surplus condition" in response to the diversion orders of downstream users, and flood flows. Army Corps of Engineers guidelines dictate the release of water from Hoover Dam from August through December to ensure sufficient flood control storage capacity. These releases are known as "space building releases," while releases made after January 1 to ensure sufficient flood control storage capacity are known as "flood control releases." Both are also referred to as "spills." These flows may be diverted by downstream users. It is important to note that the current timing of flood control releases precedes the natural flood regime and

11. See response to Comment 22-8

12. See Sections 1.3.6 and 3.3.1.2 for explanations of flood control operations for Lake Mead (Hoover Dam)

COMMENT LETTER

RESPONSES

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cont'd therefore offers less benefit for the successful recruitment of native riparian vegetation such as cottonwoods and willows than if these releases more closely mimicked the river's natural flood regime

THE DEIS

POTENTIAL AFFECTED AREA

13 The DEIS notes the requirement to assess transboundary impacts, pursuant to Executive Order 12114 and the Council on Environmental Quality Guidelines on NEPA Analyses for Transboundary Impacts, as well as the regulations implementing Endangered Species Act consultations with the Fish and Wildlife Service and the National Marine Fisheries Service. Yet the DEIS states that the potential area of impact extends downstream only as far as the Northernly International Boundary (NIB) (p. 3 2-1). This is inconsistent with the Lower Colorado River Multi-Species Conservation Program (MSCP) planning area, which extends as far south as the Southernly International Boundary (SIB), 23 miles further south. It is also inconsistent with the controlling legal authority noted above. Ironically, Map 3 2-1 of the DEIS identifies the "Area of Potential Effect" as extending below the NIB, below the SIB, as far downstream as the river's mouth at the Gulf of California.

The geographic scope of the DEIS should be broadened as well as lengthened. Below Morelos Dam, the river's floodplain widens toward the south. The entire region within the levees in Mexico should be included as the potentially impacted area, as releases of sufficient magnitude to cause overbank flooding could potentially inundate much or all of this area; the 100-year floodplain is much broader in the delta than it is upstream. The DEIS should list the size of the affected area for each of the reaches of the river examined and include specific vegetation coverages for each area. Much of this information has been compiled by the MSCP for the U.S. reach of the river, and has also been documented for the Mexican region.¹

14 Historically, the Colorado River emptied into the upper Gulf of California, creating one of the world's most productive estuaries. As a result of flood control releases in the mid-1980s and again starting in 1997, water again flows into the Upper Gulf. These flows generate measurable ecological and economic benefits. Such benefits would be negatively impacted by the projected reductions in flows due to the implementation of surplus criteria. These impacts should be analyzed in the supplemental DEIS.

15 The letter (in Attachment Q) from Arturo Herrera, Commissioner of the Mexican counterpart to the US State Department's IBWC, highlights several other potential impacts resulting from the implementation of surplus criteria, including reduced recharge of the Mexicali aquifer. Annual overdraft of the aquifer is partly offset at present by infiltration from periodic Colorado River flood flows. Absent this periodic recharge, the level of the water table would drop more rapidly, increasing the hydrologic gradient under the border and drawing groundwater from the U.S. Such indirect impacts extend the area of potential effect and should be analyzed as part of the

13 Potential effects on special-status species within the expanded area of potential effect are addressed Section 3 8 of the FEIS. Map 3 2-1 has been revised to more accurately represent the area of potential effect considered within the U.S. as well as areas within Mexico that are addressed in Section 3 16. Transboundary Impacts.

14: See response to Comment 12-8

15. Reclamation believes that the analysis presented in this section. Section 3 16. Transboundary Impacts, has been modified for the FEIS and adequately and appropriately identifies potential effects of interim surplus criteria in Mexico. Note that Reclamation is committed to working with Mexico to address specific concerns.

¹ See Daniel F. Loeckle et al., 1999. *A Delta Once More: Restoring Riparian and Wetland Habitat in the Colorado River Delta*. Washington, DC: Environmental Defense Fund Publications, pp. 20-29.

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- cont'd
- NEPA process. Commissioner Herrera also underscores the potential environmental impacts on the delta resulting from surplus criteria.¹
- Reclamation dismisses Commissioner Herrera's concerns by stating that "it is not clear that these concerns are a result of interim surplus criteria" (3.16-3). Dismissing these concerns violates the spirit of consultation with Mexico. And, as noted in the DEIS, the selected alternative will alter the frequency and magnitude of flood flows reaching Mexico, indicating that such concerns are in fact real. The supplemental DEIS should extend the area of potential impacts to encompass the full range of potential impacts to the delta region and the Upper Gulf of California, as well as regions indirectly impacted due to reduced recharge of the Mexicali aquifer and the likely increase in transboundary groundwater flows due to increased pumping in Mexico.
- DEIS AND HABITAT**
- 16 The DEIS fails to provide an adequate description of the habitat and species composition present along the lower Colorado River in the U.S. and in Mexico below Morelos Dam. The DEIS should provide a map displaying the various vegetation coverages along the river downstream of Mohave Dam to reflect riparian and wetland habitat present in the various wildlife refuges along the river and within the delta in Mexico. The minimum stage necessary to freshen backwaters along the mainstem of the river and to inundate the floodplain in Mexico should be indicated on the map, along with a projected frequency interval at which these conditions would be satisfied under the different alternatives under consideration. The DEIS offers only generalized information and aggregated acreage estimates, despite the fact that more refined data exist.²
- 17 The DEIS does not address the significant difference in the quantity and frequency of water reaching the delta that the model projects for the flood control alternative and the Six States' Plan. Table 3.16-1 indicates that, in the year 2015, the probability of flood flows reaching the delta is more than 16 percent greater under the flood control alternative than under the Six States' Plan. The reduced frequency of flows to the affected area under the Six States' Plan would cause further harm to habitat in the area, subsequently impacting the species that depend on this habitat. The DEIS should analyze these impacts.
- 18 Section 3.16.6.1 states that reductions in flows below the NHJ were instituted through the 1944 Treaty. This statement is incorrect and is likely not what was intended. The Treaty establishes minimum, not maximum, flows. In fact, the Treaty increased the quantity of flows that the U.S. was prepared to deliver to Mexico.³ The responsibility for the dramatic reductions in the flow of the Colorado River to its delta, from historic levels of roughly 14 MAF/year to zero in most years, lies with U.S. interests.
- CUMULATIVE IMPACTS**
- 19 NEPA requires a cumulative impacts analysis: the cumulative impacts of surplus criteria along increased upper basin consumption and continued excessive use by California, among other

16: Potential effects on special-status species within the river corridor between Hoover Dam and the SIB are addressed in the BA for ISC/SIAs and have been summarized in Section 3.8 of the FEIS.

17: The EIS discusses these potential effects as necessary to identify the differences between each of the alternatives compared to baseline conditions. Table 3.16-1 has been updated in the FEIS with revised data.

18: Comment noted. Section 3.16.6.1 has been revised to state that "reductions have been instituted while meeting the requirements of an international treaty and the diversion and use of such treaty water is solely at Mexico's discretion." At least since execution of the Treaty, it is incorrect to state that responsibility for reductions of flows to Colorado River delta lies with U.S. interests alone.

19: See response to Comment 12-5.

¹ Note that "álanos" in the Commissioner's letter is correctly translated as "cottonwoods."

² See Daniel F. Luecke et al. 1999. *A Delta Once More*. pp. 20-29.

³ Norris Hundley, Jr. 1966. *Dividing the Waters: A Century of Controversy between the United States and Mexico*. Los Angeles: University of California Press.

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cont'd

actions can not be dismissed. The DEIS provides less than a page on cumulative impacts (4-2). The cumulative impacts analysis should list and describe all of the federal and non-federal actions that could impact the affected area, including reasonably foreseeable future actions. These listed impacts should then be analyzed in light of the additional incremental impacts posed by the surplus criteria. The DEIS dismisses the potential incremental impacts due to the selection of a preferred set of surplus criteria, stating that "the potential effects of interim surplus criteria are likely to be negligible" relative to other actions. This is not an adequate cumulative impacts analysis.

PACIFIC INSTITUTE PROPOSAL

20

The "Environmental Interim Surplus Criteria," submitted by ten NGOs and subsequently endorsed by the Center for Biological Diversity and The Wilderness Society, should be analyzed in a supplemental DEIS. These criteria would satisfy the objective of facilitating California's reduction in its use of Colorado River water, without forcing the environment to bear the costs of such actions. Although similar in many respects to the Six States Plan, the Environmental Criteria differ sufficiently to merit appraisal in a supplemental DEIS.

20: See responses to Comment 11-8 and 13-4

In the following, and per previous conversations and correspondence with Reclamation staff, we offer suggestions as to how best to model the Environmental Interim Surplus Criteria, and suggest several specific projections that should be included in the supplemental DEIS.

Clarifications:

21

- Reclamation should model the monthly release schedule under "2) baseline delta flows" so that these delta flows are relatively constant throughout the year.
- Reclamation should model the monthly release schedule under "5) delta flood flows" so that 100% of such releases are made from May through July, peaking in June at a ratio of 35%, 45%, 20% (flows in other months would be released by the baseline flow trigger, above).
- Due to difficulties in modeling a Secretarial determination of "No Net Loss," for the purposes of modeling Reclamation should assume that such a determination is made.

21: Reclamation has noted the clarifications of the Pacific Institute's proposed interim surplus criteria, and the recital of differences between its proposal and the Seven States Proposal. The revised provisions of Pacific Institute's plan have been included in Attachment F of the FEIS entitled Surplus Criteria Proposal by Pacific Institute.

Differences between the Environmental Criteria ("NGO") and the 7 States' Plan ("States"):

- **Normal elevation trigger:** ≤ 1120.4 for NGO; ≤ 1125 for States
- **Baseline delta flows** 0.032 MAF above elevation 1120.4 for NGO; none for States
- **Partial M&I/Domestic surplus elevation** triggered between 1125 & 1145 for both; for purposes of these modeling runs, the quantities of water released under the two plans are equivalent
- **Full M&I/Domestic Surplus** triggered above elevation 1145; NGO plan equivalent to States' plan with the following exceptions: Total deliveries through the Colorado River Aqueduct would be limited to 1.212 million acre-feet under the NGO plan instead of 1.250 under the States' plan
- **Delta Flood Flows** triggered by Reclamation 70 percent flood control avoidance elevation (70A1) under the NGO plan; no such release under the States'

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cont'd

- **Full Surplus/Quantified Surplus** 70R trigger for both plans, although for the purposes of determining the trigger elevation the NGO plan considers the above delta baseline and flood flows as "uses" and the States plan does not (so the trigger elevation will be higher under the NGO plan). Unlike the States' plan, under the NGO plan, no water would be made available to California or Nevada for off-stream storage, including groundwater banking, under this tier, and no surplus water would be made available to Arizona for such purposes under this tier.
- **Flood Control Surplus** equivalent for the two plans
- **Shortage Criteria** the NGO plan does not establish shortage criteria

Requested information:

- Probabilities of shortage under the two plans, using the States' definition of shortage
- Probabilities of delta flood flow releases over time
- Probabilities and projected quantities of flows below all major diversions, under the two plans
- Probabilities and projected quantities of flow released under Partial M&I/Domestic surplus, under the two plans until year 2016

22: Comment noted

22

23

The DEIS states that "the delivery of water to or through Mexico would require modification of the Treaty" (2-3). This is incorrect. The Treaty requires the U.S. to deliver a minimum quantity of flows to Mexico; it does not limit the amount of water the U.S. may deliver. In 1998, the U.S. delivered more than 3.0 MAF over Treaty obligations; in 1984, the U.S. delivered more than 13.8 MAF over Treaty obligations. The development and implementation of interim surplus criteria are subject not only to the demands of California and the basin states, but to the Law of the River and the laws of the United States, including NEPA and the ESA. Within this broader context, the proposed environmental surplus criteria are appropriate. Reclamation and the basin states will likely come to find that the limited dedication of resources for environmental purposes outlined in the environmental criteria are far more benign than the mitigation that will be required should they choose to ignore environmental impacts in the U.S. and Mexico.

23: See response to Comment 18

MODELING

The adoption of interim surplus criteria would create a new set of operational instructions for managing the river; it would not require the construction of new infrastructure. The direct environmental impacts of such criteria would be limited to the effects of changes in river operation. To project the potential impacts of such changes, Reclamation created a basin-wide model that uses the historical record (since 1906) of Colorado River flows to predict future inflows to the system and releases from Lake Mead. As noted by Reclamation, the results of the model are most sensitive to projections of future inflows, the least reliable data. The accuracy of the model also decreases the further it projects into the future. Reclamation contends that the main value of the model is that it allows for an analysis of the relative impacts between the proposed alternatives, rather than an analysis of the absolute impacts of any one alternative.

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These comments address three general aspects of the model: the assumptions common to all alternatives, the assumptions for specific alternatives, and the presentation of the model results. There are five assumptions common to all alternatives that should be refined:

- 24 1 **Inflows** Even over the brief historical record, the yearly natural flow of the Colorado River has varied dramatically, ranging from an estimated low of 5.0 MAF in 1977 to an estimated high of 23.6 MAF seven years later. It is not clear that the Index Sequential Method (ISM) used in the model captures the full range of future variability, particularly for the brief 15 year duration of the surplus criteria. We suggest using a partially random model, one that inputs all of the possible permutations of the historical record, to increase the range of possible flows during the interim period.
- 25 2 **Upper Basin Consumption** The model uses 1996 projections of upper basin consumptive use. These projections reflect a maximum probable rate of increase. As noted by Reclamation at its Hydrological Modeling meeting (8/15/2000), upper basin diversions (and consumptive use) are subject to flow variability because many of them are run off the river diversions, rather than diversions from stable reservoirs, decreasing the likelihood that diversions will match projected demand. The model should incorporate most probable and minimum probable rates of increase for upper basin consumptive use, and Reclamation should assess the sensitivity of the results to differences in such projections. Such rates of increase affect the quantity of inflows to Lake Mead and therefore projections of Mead elevation, important for projecting flood releases, flows, shoreline impacts, and probabilities of shortage conditions.
- 26 3 **Initial Mead Elevation** The model uses as a starting condition the elevation of Lake Mead on January 1, 2000. To improve the accuracy of the model, we recommend that this starting elevation be changed to reflect the projected Mead elevation on December 31, 2000, currently expected to be about thirteen feet lower than the previous year's elevation due to lower than average inflows. This significant drop in elevation will decrease the probability of water reaching the delta region.
- 27 4 **Deliveries at NIB** The DEIS notes that the U.S. delivers approximately 0.14 MAF/year to Mexico at a location one mile east of the river at the SIB. Yet the model assumes that this delivery occurs 23 miles north, within the river channel. The model should be refined to account for the different delivery points, the fact that the SIB delivery is not made within the river channel, and the fact that the SIB deliveries are return flows from Arizona and not mainstem water. This modeling assumption distorts projected flows through the limitrophe and further downstream, and also distorts projections of maximum probable diversion by Mexico through its Alamo Canal at Morelos Dam.
- 28 5 **Yuma Desalting Plant** The model assumes that the Yuma Desalting Plant will be operational in the year 2015, yet fails to account for the impacts such an action would have on the Cienega de Santa Clara. The Cienega currently relies on agricultural drainage flows that bypass the desalting plant; operation of the plant would not only markedly decrease the quantity of flows to the Cienega but would also markedly decrease the quality of the water sent to the wetlands, destroying habitat of special status species such as the Yuma Clapper Rail and Desert Pupfish. The DEIS should explain why it assumes operation of the plant in 2015 and should not ignore the environmental impacts of such an action. Alternatively, and more appropriately, the DEIS should not assume operation of the plant until the appropriate environmental documentation has been completed.

24 See the response to Comment No. 31-8 for a discussion of the Index Sequential Method. Other methods are possible, and Reclamation is evaluating them for future use.

25 See response to Comment No. 14-10 for information regarding depletion schedules used in the FEIS.

26 The projected Lake Mead elevation on January 1, 2002 was used for the initial condition in FEIS modeling. See response to Comment No. 13-22 for further discussion.

27 The following excerpt will be added to Section 3.4.3.6 to address the Mexico water supply delivery requirements under Minute 242: Minute 242 provides, in part, that United States will deliver to Mexico approximately 1,360,000 acre-feet (1,677,545,000 cubic meters) annually upstream of Morelos Dam and approximately 140,000 acre-feet (172,689,000 cubic meters) annually on the land boundary at San Luis and in the limitrophe section of the Colorado River downstream from Morelos Dam. It should be noted that while a portion of Mexico's 1.5 maf annual apportionment is actually delivered below Morelos Dam, the entire delivery to Mexico was modeled at Morelos Dam. This basic assumption, while different than actual practice, served to simplify and facilitate the analysis of water deliveries to Mexico under the baseline conditions and surplus alternatives.

28 See response to Comment No. 11-14 for a discussion of the FEIS assumption that the Yuma Desalination Plant will begin operations after 2022.

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- 29 6 Climate Change For the purpose of increasing the accuracy of longer-term projections, the model should incorporate the range of potential impacts of climate change on the Colorado River basin, which might reduce inflows by as much as 20 percent^a

The assumptions behind the various alternatives differ in some respects. These varying assumptions inform the projections of the alternatives' relative impacts. The DEIS bases much of its analysis on the relative difference in flows under the different alternatives, making the assumptions behind these alternatives especially important. Reclamation should clarify the following points:

- 30 1 Baseline NEPA requires consideration of a "no action" alternative, to serve as a baseline for comparison. To date, no formal surplus criteria exist to act as such a baseline. The Secretary, acting without formal guidelines or criteria, has declared a surplus condition for the river each year starting in 1996. Hydrologic conditions have varied considerably over the five years in which surplus has been declared, to the extent that in 1996 insufficient volume was deemed available to provide surplus for Mexico, while in 1998 more than 3.0 MAF were released above downstream demands. Reclamation determined that a "75R" strategy offered the best approximation of conditions on the river at the time of the Secretary's declaration in 1997. The DEIS fails to explain why Reclamation selected 1997 as the baseline year. Selecting 1996 as the baseline would have generated a much more liberal definition of surplus, while selecting the years 1998-2000 would have matched a flood-control definition of surplus (2.2-1.4). Reclamation should explain why it used a single year as the model for the baseline condition, rather than the three years that followed. Although not markedly different than the 75R baseline, a flood-control baseline would generate a greater frequency and magnitude of flows to the delta than the 75R baseline and a 16.7% greater chance of flood flows than the Six States alternative in 2015.
- 2 California Consumptive Use As shown in DEIS Attachment G, the 75R baseline and the flood control alternatives assume that California will only consume roughly 4.4 MAF/year. In comparison, the six states' plan assumes California will consume more than 5.2 MAF at full surplus, and 5.0 MAF decreasing to 4.7 MAF at the Level 2 surplus tier. Yet the main impetus for the creation of interim surplus criteria is to reduce California's use to 4.4 MAF/year. If California were only consuming 4.4 MAF/year, as assumed by the baseline, there would be no need for interim surplus criteria. It is inconceivable that California will reduce its use by more than 0.8 MAF in one year. The baseline's "no action" alternative therefore does not accurately reflect actual conditions.
- 31 3 Six vs. 7 State Plan The 7 State Plan is the consensus approach submitted by the Colorado River Basin states and therefore will very likely be the preferred alternative. Reclamation claims that the 7 State Plan (65 Fed Reg 48531) is substantially similar to the Six State Plan that is analyzed in the DEIS, and that it does not require its own analysis. The differences between the two plans therefore demand scrutiny to assess whether the DEIS analysis of the Six State Plan is a reasonable proxy for what is likely to be the preferred alternative. The

29 There is not yet a consensus in the scientific community regarding whether long-term climate change will result in overall wetting or drying of the Colorado River Basin. The use of the Index Sequential Method captures a wide range of flow conditions that enables the evaluation of future water supply conditions under different hydrologic scenarios. See the response to Comment No. 31-8 for a discussion of the Index Sequential Method.

30 Reclamation did not use only a single year as the basis for the baseline in the DEIS. See the response to Comment 57-11 for an explanation of the derivation of the baseline.

31 Reclamation's statement that the Seven States Proposal was substantially similar to the Six States Alternative was a conclusion about the need for a preliminary analysis to accompany the DEIS. The preferred alternative has been derived from the Seven States draft proposal, and has been analyzed in this FEIS at the same degree of detail as the other alternatives.

^a See L. Nash and P. Gleick, 1991, The sensitivity of streamflow in the Colorado basin to climatic changes, *Journal of Hydrology*, 125: 221-241 and L. Nash and P. Gleick, 1991, The Colorado River Basin and Climatic Change: The Sensitivity of Streamflow and Water Supply to Variations in Temperature and Precipitation, Washington, DC: US EPA, EPA/230-R-93-009, 121 pp.

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following simplified table depicts specific differences between the two plans in their prescribed surplus deliveries to California:

cont'd	Surplus Tier	Six States	7 States
	Partial M&I for MWD	0.304 MAF ² , less new transfers	0.262 MAF
	Full M&I for MWD	0.554 MAF ² , less new transfers	0.700 MAF

There are also programmatic differences between the two plans. The 7 State Plan is likely to increase consumptive use by California, further decreasing the elevation of Lake Mead and further decreasing the frequency and magnitude of excess flows reaching the delta and Upper Gulf.

The data generated by the model should be presented in a clear manner that conveys pertinent information to the reader. Model results should be refined as follows:

- 32 1 **Annual Scale** Much of the specific data in the DEIS is presented only for the years 2005, 2015, 2025, and 2050, providing only two data points for the interim period. At a minimum, the DEIS should present actual data for 1999 as a historical reference, and then project flows for the years 2000, 2005, 2010, and 2015, in addition to the longer-range projections, to provide the reader with a more precise understanding of the potential impacts of the various alternatives.
- 33 2 **Seasonal Scale** The DEIS projects monthly releases as proxies for seasonal flows to the delta. However, the months selected to represent seasonal flows (January, April, July, and October) do not reflect maximum discharge rates. The maximum quantity of flows to the delta in 1997, for example, occurred in the months of February, August, and September. Months should be selected based on their ability to represent maximum and minimum flows to the delta.
- 34 3 **Instantaneous Discharge** To provide a more accurate picture of transboundary impacts, the model should be adjusted to project instantaneous releases. Such discharge rates can be readily converted to river stage, allowing for an assessment of the potential to freshen backwaters in the U.S. and inundate the floodplain in Mexico below Morelos Dam. Both of these actions are critical for protecting and enhancing existing wetland and riparian habitat. Additionally, the DEIS states that uncertainty about water use in Mexico challenges efforts to predict potential effects of transboundary flows. The Pacific Institute agrees that it is reasonable to assume that Mexico will continue to maximize its consumptive use of Colorado River water. This use could be predicted by comparing the conveyance capacity of the Alamo Canal with instantaneous flow rates above Morelos Dam (effectively a run of the river diversion).
- 35 4 **Figures** The DEIS should clearly indicate the differences between the various alternatives under consideration. Many of these differences are slight and tend to be lost at the resolution displayed in the graphs in the DEIS. Figures 3.3-21a-d, for example, would benefit from limiting the x-axis to those values between 75% and 100%, which would enable the reader to draw a better distinction between the alternatives. Additionally, the DEIS incorrectly claims that the highest frequency of flows to the delta is expected to occur under the Six States

32: Figures and text were provided in the various sections of the DEIS and FEIS that describe current and historical conditions, many on an annual basis.

33: See response to Comment No. 13-27 for a discussion of seasonal analyses.

34: See response to Comment No. 13-28 for a discussion of model time steps.

35: Comment noted. All tables and figures have been updated to reflect data modeled for FEIS, and have been made more readable. The incorrect statement regarding frequency of flows to Mexico being greater for the baseline and flood control alternatives has been corrected.

² Includes 0.108 MAF BD MWD transfer (1999 level)

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Alternative (3.3-44) As shown in Figs. 3-3-21a-d both the baseline and flood control alternatives would generate more frequent flows to the delta than the Six States Alternative.

7 STATE PLAN

The DEIS does not analyze the 7 State Plan, so its potential impacts can only be estimated from the projections for the Six State Plan. Beyond this failure to satisfy NEPA guidelines, there are several shortcomings associated with the 7 State Plan itself. Chief among these is that it does not require that California reduce its use from current levels of roughly 5.2 MAF/year to the state's legal entitlement of 4.4 MAF/year, a reduction of 0.8 MAF/year. Instead, the 7 State Plan states that California expects to implement projects generating 0.38 MAF of savings by 2011, 0.49 MAF of savings by 2016, and 0.54 MAF of savings by 2026, though it fails to provide a baseline for measuring such savings. Absent such a prescribed baseline, we assume that the savings will be measured against current levels of consumption. Yet this suggests that California will fall far short of the 4.4 MAF objective that is being promoted as the rationale for accepting greater depletions of Colorado River water and further harm to the environment.

The long-term Colorado River system management objectives require the Secretary to protect and enhance the environmental resources of the basin. Yet clause III 3 (f) of the 7 State Plan would preclude releases of water for any purposes other than those outlined in the Plan, including potential releases for the Lower Colorado River MSCP or releases to the Colorado River delta. This clause of the 7 State Plan is invalid and should be deleted. The *Arizona v. California* Decree (1964) established the Secretary of the Interior as River master and vested in him federal control of the Lower Colorado River. The states lack the legal authority to prohibit releases for other purposes.

SECRETARIAL DISCRETION

Allocation of surplus water, over and above the basic lower basin apportionment, is a discretionary function of the Secretary that can and should be exercised consistent with other responsibilities incumbent upon him for allocating the benefits of the river, planning its use, and protecting its resources. Past decisions on development, basic allocations, and operations were made before most of those other responsibilities had been articulated under laws and policies of the United States. This has resulted in serious environmental harm. Given this situation, the Secretary can and should use his discretion in this more enlightened era to the maximum extent possible to ensure that his decisions result in no further harm and, wherever possible, in an improvement of environmental quality.

Environmental needs must be met before any quantity of discretionary water is dedicated to consumptive uses. Until then it is not truly "surplus." Environmental losses were perhaps unfortunate consequences of the basic allocations embedded in the Law of the River and related development; but they need not be perpetuated when the Secretary has discretion over whether and when to allocate additional water. The Secretary recognized as much when he insisted that the surpluses must be determined and allocated with no net loss of environmental benefits.

36: The Seven States Proposal is identified as the Basin States Alternative/Preferred Alternative in the FEIS. The Basin States Alternative has been evaluated in this FEIS. Several particular sections of the Basin States Alternative, including III 3 (f) have not been incorporated in the Basin States Alternative/Preferred Alternative.

37: The Secretary, under the powers vested by Congress in Section 5 of the BCPA, as confirmed by Section II(B)(2) of the 1964 Decree, has certain discretionary authority to determine whether any year is a surplus, normal or shortage year. When more than 7.5 maf of Colorado River water is available for consumptive use during a calendar year in the three lower Division States, this is a surplus determination. Pursuant to the Decree II(B)(2), if sufficient mainstream water is available for release to satisfy annual consumptive use in excess of 7.5 maf, such excess consumptive use is surplus, and 50 percent shall be apportioned for use in California, 46 percent apportioned for use in Arizona, and 4 percent for use in Nevada. When making a surplus determination, the Secretary must apply the criteria in the Long-Range Operating Criteria (Section 602 of P.L. 90-537) in development of the Annual Operating Plan.

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SOCIOECONOMIC IMPACTS

38

The DEIS fails to address the potential socioeconomic impacts of interim surplus criteria. The few remaining Cucapá living in the affected area, who traditionally subsisted on Colorado River fish and endemic grains, depend on Colorado River flows.⁸ Decreasing the frequency and magnitude of these flows will negatively impact the Cucapá. Additionally, Colorado River flows are correlated with improved yields in the shrimp and fish harvests in the Upper Gulf of California,⁹ a major source of employment in the area.¹⁰ The reduced frequency and magnitude of such flows due to the sole and cumulative impacts of surplus criteria will have negative economic repercussions on fishermen and others in the affected area. These impacts should be assessed as part of the DEIS.

CONCLUSION

The Pacific Institute concludes that the DEIS is inadequate and should be formally revised and reissued for public comment as a Supplemental Draft Environmental Impact Statement. The deficiencies highlighted in these comments are of sufficient magnitude that they preclude a reasonable assessment of the potential environmental impacts associated with the adoption of interim surplus criteria.

38 The DEIS and FEIS include a section on "Environmental Justice" (3.15) for purposes of addressing potential economic and social impacts on minority and low-income populations. Executive Order 12898 establishes the achievement of environmental justice as a priority, but this direction is specific to minority and low-income populations in the United States. No socio-economic effects are anticipated due to implementation of any of the interim surplus alternatives. In addition, the transboundary impacts section of the EIS, which addresses impacts to natural resources on Mexico, does not anticipate any adverse effects to sensitive biological resources along the river in Mexico. This includes potential impacts to commercial or subsistence harvesting of shrimp, fish or crops in Mexico.

⁸ Daniel F. Loeckle et al. 1999. *A Delta Once More*, pp. 7-8.

⁹ Manuel S. Galindo-Reyes et al. 2000. Penaeid shrimp landings in the upper Gulf of California in relation to Colorado River freshwater discharge. *Fisheries Bulletin* 98:222-225.

¹⁰ Jason Morrison et al. 1996. *The Sustainable Use of Water in the Lower Colorado River Basin*. Oakland, CA: Pacific Institute for Studies in Development, Environment, and Security, p. 23.

COMMENT LETTER

September 8, 2000

Regional Director
Lower Colorado Region
Attention: Jayne Harkins (LC-4600)
Bureau of Reclamation
PO Box 61470
Boulder City, Nevada 89006-1470

Handwritten:
Harkins
REC'D

RE: Colorado River Interim Surplus Criteria Draft Environmental Impact Statement

Dear Jayne

Southwest Rivers appreciates the opportunity to comment on the Colorado River Interim Surplus Criteria Draft Environmental Impact Statement (DEIS) developed by the Bureau of Reclamation. Southwest Rivers is a newly formed non-profit organization with a mission to protect and restore the river ecosystems of the Colorado River basin. Established by the staff and directors of other conservation organizations active in the Colorado River basin, Southwest Rivers is focused on the long-term health of the riverine ecosystems of the Colorado River watershed.

1 Southwest Rivers joins several other environmental groups in expressing substantial concerns about the impact of the proposed action on the Colorado River ecosystem. (We support the comments filed by the Pacific Institute for Studies in Development, Environment and Security, as well as those filed by the Defenders of Wildlife, et al.) Although the Department of the Interior and the Colorado River basin states have decided that the benefit of implementing California's plan to reduce its use of Colorado River water down to its legal entitlement is of paramount importance in the Colorado River system, we cannot agree. We are supportive of efforts to reduce California's use but not at the expense of Colorado River ecosystems. California claims that availability of surplus water over the next 15 years is essential to the success of its plan. But since the long-term effects of reducing California's use are unlikely to provide any significant environmental benefits, since California currently relies on unused apportionments to provide the additional water used which in the future would then be used by other states, the short-term environmental costs of this proposed action are an unacceptable price to pay. We believe that there must be some element to the action that provides a benefit to the environment which counteracts the potential costs.

1: Comment Noted

2 The DEIS as published is deficient in a number of ways. As it stands, it contains enough inadequacies, inaccuracies and omissions that it is incomplete for purposes of meaningful public review. Southwest Rivers recommends that a supplemental draft be prepared and distributed for comment prior to the preparation and release of a final environmental impact statement.

2: Comment Noted

1 The DEIS Omits Material Essential for an Analysis of the Proposed Action

Southwest Rivers has identified a number of elements that are material to an analysis of the proposed action which have not been included in the DEIS.

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A The 7 State Plan must be included and analyzed in a DEIS if it is to be considered as an alternative

Following the July 7, 2000 publication of the DEIS, the Bureau of Reclamation on August 8 published the 7 States' proposed interim surplus guidelines (65 Fed Reg 48531). According to Reclamation, a "preliminary review" of the plan indicates that it lies "within the range of alternatives and impacts analyzed in the DEIS." However, since it has not been formally presented within the DEIS as an alternative, analyzed in the same manner as other alternatives presented in the DEIS, and contains different elements than other alternatives presented, it must be included and analyzed in a supplemental DEIS before it can be considered as an alternative and potentially selected as the preferred alternative. CEQ regulations require that the alternatives section of an EIS "present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." (40 CFR 1502.14)

B. The "Pacific Institute" alternative is a reasonable alternative and should be included and analyzed in a DEIS

Article I(2) of the long-range operating criteria for the Colorado River Reservoirs requires a plan of operation that reflects "appropriate consideration of the reservoirs for all purposes, including enhancement of fish and wildlife, and other environmental factors." (35 Fed Reg 8951) As a clarification of the long-range operating criteria, the development and implementation of interim surplus criteria are subject not only to the needs of California and the other basin states, but to the long-range operating criteria and other elements of the Law of the River and the laws of the United States, including NEPA and the ESA. The adoption of any of the current alternatives for interim surplus criteria or the 7 State Plan would not meet the Secretary's environmental responsibilities within system operations. The alternative submitted to Interior by the Pacific Institute and nine other environmental organizations meets both the purpose and need for interim surplus criteria and the Secretary's broader environmental responsibilities. Contrary to Reclamation's assertion on page 2-3 of the DEIS that "the delivery of water to or through Mexico would require modification of the Treaty," delivery of water to Mexico beyond the *minimum* amounts required by the treaty could be undertaken unilaterally by the United States. Therefore, the Pacific Institute alternative both meets the purpose and need for the action and is reasonable.

CEQ regulations on the preparation of NEPA documentation require that an EIS "rigorously explore and objectively evaluate all reasonable alternatives." (40 CFR 1502.14(a)) The exclusion of a reasonable environmental alternative that both meets the purpose and need for the action and includes limited dedication of resources for environmental purposes is arbitrary and capricious. A supplemental DEIS which fully includes and analyzes the Pacific Institute alternative should be prepared and distributed.

3: Please refer to the response to Comment 10-4

4: An EIS need not consider an infinite range of alternatives, only reasonable and feasible ones and those reasonably related to the purposes of the project that afford a reasoned choice by the decision maker. The rule of reason shall be utilized in development of a range of alternatives. NEPA does not require a separate analysis of alternatives which are not significantly distinguishable from alternatives actually considered, or which have substantially similar consequences. For these reasons, Reclamation considered the Pacific Institute proposal but eliminated it from further analysis because part of it did not meet the purpose and need of the proposed action and the remainder of the alternative mirrored the Six State's Alternative which was analyzed in depth for the DEIS. Please also refer to the response to Comment 11-2

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C. The California "4.4 Plan" must be included

Integral to many of the alternatives presented in the DEIS is the implementation of the California plan to reduce the state's use down to its legal entitlement (frequently - although perhaps erroneously - referred to as the "4.4 Plan"). The DEIS explicitly states that "the Secretary may condition the continuation of interim surplus criteria for the entire period through 2015 on a showing of satisfactory progress in implementing the 4.4 Plan." (DEIS, 1.22) However, no version of this 4.4 Plan has been included in the DEIS. Without the 4.4 Plan it is impossible to measure the quantities of water involved in the alternatives that include implementation of the plan, and likewise it is impossible to gauge California's compliance.

We realize that all the details of the 4.4 Plan and its implementation have not been worked out. However, CEQ regulations mandate the inclusion of such materials in a DEIS: "If the incomplete information relevant to reasonably foreseeable significant adverse impacts is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant, the agency shall include the information in the environmental impact statement." (40 CFR 1502.22(a)) A supplemental DEIS which includes the California 4.4 Plan should be prepared and distributed.

D. The Upper Colorado River Commission's new depletion schedule must be included

The modeling and analysis that was included in the DEIS used a depletion schedule for the Upper Basin states that was developed in 1996. A new schedule was developed in 1999 (DEIS, 3.4-11). Given the importance of Upper Basin depletions to the results of the modeling and the determination of effects on the environment, the updated depletion schedule should be used in the modeling of effects and such model results should be made available for review prior to release of a FEIS. A supplemental DEIS which includes analyses based on the updated depletion schedule should be prepared and distributed.

E. The geographic scope omits areas of potential impact

A material failure of the DEIS is its omission of several potentially affected geographical areas in the geographic scope and subsequent analysis within the document. Of significant concern is the omission of the area from the Northernly International Boundary to the Southernly International Boundary (Limnrophe Division), as well as the river and its full floodplain within its delta in Mexico, all the way to the Gulf of California. These areas must be included in the supplemental DEIS.

F. Scope of Effects Analysis Inappropriately Omits Areas Subject to Other Environmental Mitigation Programs

In several places, the DEIS omits any effects analysis for a geographic area due to the existence of another existing environmental mitigation program. This is most notable in the analysis of effects of the proposed action within the Grand Canyon reach of the Colorado River.

5: The purpose and need acknowledge California's efforts to lower their Colorado River consumptive use. The DEIS did note that in Section 1.4, Related and Ongoing Activities, the 4.4 Plan, now the California Colorado River Water Use Plan (CA Plan), was under development. Further, the CA Plan is not a federal action. To the extent federal actions are required as part of the plan, each element will undergo appropriate environmental compliance. As evidenced by the recent draft version of the CA Plan, this is still a work in progress, although various parties have different views. Reclamation has never viewed surplus as a part of the CA Plan. Moreover, the measure of progress in implementing the CA Plan concerns reduction in water need rather than physical or institutional arrangements.

6: Revised depletion schedules provided by the Basin States were used in FEIS analyses. See response to Comment No. 14-10 for more detail.

7: The area of potential effect has been expanded for the FEIS to include the Colorado River and 100-year floodplain to the Southernly International Boundary within the U.S. Section 3.16 of the EIS, Transboundary Impacts, addresses potential effects within Mexico.

8: An analysis of the frequency with which the triggering criteria for BHBFs and low steady summer flows would be met under each of the alternatives has been conducted for the FEIS (see Section 3.6). When compared to the baseline conditions, the probability of a BHBF being triggered under the preferred alternative is reduced by 1.1% during the interim period (through 2016) and by 0.1% during the remaining period (through 2050). The probability of a low steady summer flow being triggered under the preferred alternative is reduced by 2.9% during the interim period and increased by 0.3% during the subsequent period. Given the margin of error in forecasting runoff, these proposed minor changes are not expected to impact the resources in the Colorado River corridor from Glen Canyon Dam to the headwaters of Lake Mead.

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cont'd

which is currently managed through the Glen Canyon Dam Adaptive Management Program. The DEIS states that there may be effects from the action on Beach Habitat Building Flows (BHBFs) and low steady summer flows, and models some of the potential effects, but provides no analysis on the potential effects to the environment of inspecting those management tools. Subsequent analysis of environmental consequences virtually ignores the Grand Canyon reach based on a determination that beyond the effect of these actions on "riverflows" this action has no effect on the Grand Canyon reach, and "the unaffected aspects of dam operations and the effect on downstream resources need no further analysis outside of the ROD and the Adaptive Management Program" (DEIS 3 2-5).

These omissions are inappropriate. CEQ regulations regarding analysis of environmental consequences requires discussions of, among other things, "indirect effects and their significance" (40 CFR 1502.16(b)) and "possible conflicts between the proposed action and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned" (40 CFR 1502.16(c)). The potential conflicts or effects of the proposed action on other environmental mitigation programs must be included in the supplemental DEIS.

G. Cumulative impacts are not fully addressed

9

The DEIS omits any discussion of cumulative impacts resulting from a number of other ongoing actions. Most notably, it fails to consider cumulative impacts from the actions following from the U.S. Fish and Wildlife Service's Biological and Conference Opinion on Lower Colorado River Operations and Maintenance (1997), impacts from the California 4 4 Plan, and impacts from the regulation for off-stream storage and banking. Such omissions should be corrected in the supplemental DEIS.

H. A Preferred Alternative is not identified

10

CEQ regulations require that agencies "identify the agency's preferred alternative or alternatives if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference" (40 CFR 1502.14 (e)). The DEIS does not identify a preferred alternative. In the interest of meaningful public review and comment, a supplemental DEIS should be prepared and distributed which either identifies a preferred alternative or provides an explanation for why a preferred alternative does not exist.

II. Some Analysis in the DEIS is Deficient and/or Inaccurate

Southwest Rivers has identified a number of ways in which the analysis of the proposed action in the DEIS is deficient and/or inaccurate.

9: Additional information has been included in Section 4.2 of the FEIS to expand the cumulative impacts analysis. However, impacts of the California Colorado River Water Use Plan or from off-stream storage and banking is considered to be outside of the area of potential effect of the proposed action. The 4 4 Plan and off-stream storage by the California parties are ongoing and other projects are only proposals at this time. These potential actions are speculative at present and without decisions that constitute an action for analysis; and do not depend on interim surplus criteria but rather are state actions. Reasonably foreseeable California actions will be analyzed through the CEQA process and if decision documents are available will be incorporated into this EIS. Actions required under the approved 1997 LCR Operations Biological Opinion are not subject to NEPA.

10: CEQ regulations do not require the identification of a preferred alternative in the DEIS, if none has been determined. A preferred alternative will be identified in the FEIS. Defining a preferred alternative in the FEIS does not define the agency's final decision but lets the public know what the agency considers the best alternative. No supplemental DEIS is required.

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A Modeling assumptions may be inaccurate and create distortion of results

11

Reclamation has used results of a basin-wide model to analyze the impacts of the various alternatives. However, the sensitivity of the model to certain questionable assumptions belies the confidence in the results, manifested in their detailed presentation, contained within the DEIS. In particular, the results of the model are most sensitive to projections of future inflows, the least reliable data, which may not even fall within the range of flows seen in the period 1906-1990, the range used for modeling. Furthermore, the accuracy of the model decreases the further it projects into the future.

Southwest Rivers suggests that several of the assumptions common to all alternatives be refined.

12

- The Index Sequential Method (ISM) used in the model may not capture the full range of potential inflows, given the extreme variability that characterizes the Colorado River system. We suggest that a partially random model be used in order to increase the range of possible flows in the interim period.

21

- As mentioned above, more recently developed depletion schedules for Upper Basin use are available. We suggest that the more recent schedules be used in the model.

22

- We recommend that the starting elevation for Lake Mead be changed from the level on January 1, 2000 to the projected elevation on December 31, 2000, which is expected to be approximately thirteen feet lower due to lower than average inflows in 2000.

23

- The model assumption for the delivery point to Mexico is inaccurate. We suggest that the model be refined to reflect the actual delivery point at the SIB, the fact that the SIB delivery is not made within the delivery channel, and the fact that SIB deliveries are actually Arizona return flows rather than mainstream water.

24

- The model assumes operation of the Yuma Desalting Plant by 2015, but the DEIS gives no justification for the assumption. The model should eliminate this assumption unless and until the environmental impacts of operating the YDP have been analyzed and documented.

Similarly, we suggest that some of the assumptions particular to individual alternatives be clarified or refined.

25

- The baseline, which in essence follows the "criteria" used in 1997 (equivalent of a 75R strategy) to declare a surplus, appears to have been arbitrarily selected. Surplus declarations were made by the Secretary without formal criteria for the years 1996 through 2000. Selecting 1996 as the baseline would have created a baseline from a much more liberal definition of surplus, while selecting the years 1998-2000 would have created a baseline that matched a flood-control definition of surplus. Given the importance of the baseline (No Action) alternative in evaluating the other alternatives, Reclamation should explain why it used a single year (1997) as the correlative of the baseline condition instead of the three most recent years of surplus declarations.

26

- The baseline and flood control alternatives assume that California will consume only about 4.4 maf a year. This does not accurately reflect actual conditions. If California were only

11: See response to Comment No. 31-8a for a discussion of the Index Sequential Method of modeling.

12: See response to Comment No. 31-8a for a discussion of the Index Sequential Method of modeling.

21: Revised depletion schedules provided by the Basin States were used in FEIS analyses. See response to Comment No. 14-10 for more detail.

22: The starting Lake Mead elevation used in the FEIS model was changed from January 1, 2000 to January 1, 2002 in order to reflect estimated reservoir conditions at the beginning of the interim surplus period. Reclamation used the 24-month study model to develop a January 1, 2002 projection based on reservoir content in September 2000 and forecasted and average future hydrologic conditions. This enabled setting the FEIS model start date to match the interim surplus criteria start date of January 1, 2002.

23: The delivery of Colorado River water to Mexico was simplified in the model to simplify and facilitate the analysis of water deliveries to Mexico. An explanation of how water is actually delivered to Mexico and the modeling assumptions with respect to the delivery of water to Mexico has been added to Section 3.3.3.3 (General Modeling Assumptions).

24: The FEIS assumed that the Yuma Desalination Plant would be operational after 2022. See response to Comment No. 37-11 for further discussion.

25: The 75R modeling criteria used in the DEIS has been changed to 70R for the FEIS. Section C of this volume includes a discussion of this change.

26: Reclamation assumes that California will abide by the use determinations as spelled out in Article II(B)(1-3) of the Decree, therefore ALL alternative model runs assume a California use of 4.4 maf when the Secretary makes the determination of a normal year (7.5 maf available) in accordance with Article II(B)(1) of the Decree. California has prepared and submitted depletion schedules that specify the amount of water scheduled for delivery and the location at which delivery is requested under normal, surplus and shortage water supply conditions. The delivery of water to California during the interim surplus criteria period is dependent on the prevailing water supply conditions and is modeled pursuant to this and the applicable depletion schedule. A copy of the revised depletion schedule prepared and submitted by California and used for the modeling of the baseline and surplus alternatives for the FEIS is included in Attachment H.

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cont'd

consuming 4.4 maf per year, there would be no need for interim surplus criteria. In fact, it is highly unlikely that California will fully reduce its use to 4.4 maf (in fact apparently reflected in its Plan) and inconceivable that it will reduce its use by more than 0.8 maf in a single year. Therefore, the baseline and flood control alternatives should be modified to reflect a more realistic projection of California's use.

D. The presentation of model results needs improvement

To improve the presentation of the model results and allow improved review and comment upon the alternatives and their environmental impacts, we suggest the following modifications:

- 13 • Present annual-scale model results at more frequent data points. Begin with actual 1999 data as a baseline, then give model results for, at the minimum, the years 2000, 2005, 2010 and 2015, in addition to the results provided for the period following termination of the interim surplus criteria.
- 27 • Select "representative" monthly flow results, intended to show seasonal changes in flows to the delta, that capture actual maximum and minimum flows to the delta. The months selected (January, April, July and October) are unlikely to capture true seasonal variability in flows.
- 28 • In order to determine river stage, which is important in determining impacts to riverine shoreline habitats and the potential for over-the-bank flows in the floodplain in Mexico below Morates Dam, the model should be modified to project instantaneous releases.

C. The predictability to California is overstated

- 14 The Purpose and Need for the action states that "through adoption of specific surplus criteria, the Secretary will be able to afford mainstream users of Colorado River water particularly users in California who currently utilize surplus flows a greater degree of predictability with respect to the likely existence, or lack thereof, of surplus conditions on the river in a given year." (DEIS, I-3, emphasis added) This is inaccurate, and overstates the predictability of surplus flows in a given year, especially to California (who will be relying most heavily on availability of such flows). Any declaration of surplus is primarily dependent upon hydrology and inflows. Storage conditions will also influence the likelihood of surplus flows, but even storage conditions can be overshadowed by extreme inflow conditions. Should the Colorado River system enter into an extreme and prolonged drought beginning in 2001, there may be no surplus declarations within the 15 year interim period, despite the fact that surplus flows are anticipated by the action to provide California with a "soft-landing" while it makes strides to reduce its consumption of Colorado River water. The purpose and need statement should be revised to reflect the reality that the action may provide greater predictability of surplus flows given a set of inflows and storage conditions, but the absolute predictability of surplus flows remains low.

13: Additional explanation has been added to Section 3.3 and Section 3.4 with respect to the interpretation of the figures in these sections and the meaning of the analysis results.

27: The intent of the analysis presented in Section 3.3.4.5 was not to evaluate the maximum or variation in seasonal flows to the delta but rather to evaluate and acquire an understanding of the potential effect of the surplus criteria under the modeled surplus alternatives relative to the modeled baseline conditions. Reclamation is of the opinion that the analysis presented in Section 3.3.4.5 accomplishes this.

28: The RiverWare model is a monthly time step model and as such is limited to evaluation of Colorado River operation conditions on an aggregated monthly basis. Reclamation will take this suggestion into consideration when making future improvements to the RiverWare model.

14: Reclamation agrees that we can not absolutely predict when surplus flows will be available in coming years. Inflow into the Colorado River and carryover storage from year to year are the variables in the system with the greatest impact on the system. However, Reclamation believes that the DEIS was accurate regarding predictability and that given certain hydrologic assumptions users will be able to predict with greater certainty the existence of surplus and expected amounts of surplus available, doing away with the dynamic factors currently used in the AOP.

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- D California's use does not drop to 4.4 maf with this action, nor are there terms for determining California's non-compliance and subsequent termination of the criteria

15 The purpose and need for this action seems to indicate that implementation of the action will facilitate California's reduction of use of Colorado River water down to its legal entitlement of 4.4 maf during the fifteen year interim period. However, as indicated earlier, it appears that California will not get down to 4.4 maf, and perhaps will not even attempt to do so within its Plan. This reality undermines the purpose and need for the action.

Furthermore, although the DEIS states that the Secretary "may condition the continuation of interim surplus criteria for the entire period through 2015 on a showing of satisfactory progress in implementing the 4.4 Plan," (DEIS, 1-22) there are no mechanisms set out within the DEIS for determining what constitutes satisfactory progress, and no terms for terminating the interim surplus criteria based on California's non-compliance. These mechanisms and terms are essential, and should be included in a supplemental DEIS.

- E The analysis of transboundary impacts is inadequate

16 Although it is encouraging to see that the DEIS addresses transboundary impacts, the analysis is cursory and based on less than current data. The analysis fails to acknowledge the potential impacts to the Gulf, the listed species (vaquita and totoaba) in the Gulf, and the socioeconomic impacts of further reductions in flow to the Gulf.

- F Critical habitat for bonytail and humpback chub is incompletely stated

17 Designated critical habitat for the bonytail as stated in the DEIS (3.8-19) omits the section in the Colorado River from Hoover Dam to Davis Dam (including Lake Mohave to its full pool elevation) and Lake Havasu (to its full pool elevation). (50 FR 13374) The statement of designated critical habitat for the humpback chub (3.8-21) is also incomplete. It omits designated critical habitat in Grand Canyon, which includes the Colorado River from Nautiloid Canyon (RM 35) to Granite Park (RM 209) and the lower 8 miles of the Little Colorado River (50 FR 13374).

- G The effect on whitewater boating in Cataract Canyon is omitted

18 The DEIS incorrectly states that "the only effect that the implementation of the interim surplus criteria alternatives would have on whitewater boaters would be the lowered pool elevations in Lake Mead." (DEIS, 3.9-34) During the period of implementation, Lake Powell and of year elevations are projected to decline, dipping below 3,640 elevation for the Shortage Protection Alternative in 2015 (Figure 3.9-1). As Lake Powell elevations decline, additional rapids are exposed in Cataract Canyon, expanding the whitewater boating opportunity in that stretch of river above Lake Powell. Therefore, implementation of the action would have a positive impact for whitewater boaters in Cataract Canyon during the implementation period.

15 See response to Comment 11-9. Whether or not California actually reduces to 4.4 maf does not eliminate the need for objective criteria that are subject to periodic reviews. Reclamation believes the preferred alternative meets the purpose and need and also will assist California in moving towards using 4.4 maf during the term of the interim surplus criteria.

16: Section 3.16.5.3 has been added to the FEIS to provide additional information on the general potential impacts that the implementation of the interim surplus criteria may have on the frequency of excess flows to Mexico as well as the potential resultant impacts to groundwater recharge and salinity south of the international border. Section 3.16.6 has been expanded to include additional information about potential impacts of the proposed interim surplus criteria on special status species and their habitat which may occur in both United States and Mexico. The Executive Order on Environmental Effects Abroad, as discussed by 3.16.2, focuses on impacts to natural resources, and specifically excludes consideration of socioeconomic impacts.

17: The descriptions of designated critical habitat have been corrected for the bonytail and humpback chub.

18: Section 3.9.4 has been revised to include the beneficial effects of lower pool elevations for whitewater boating in the Colorado River at the headwaters of Lake Powell.

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Southwest Rivers declines to formally comment on the 7 State Plan, since it has not been presented in a DEIS as an alternative. However, preliminary review of the plan spurs us to point out several deficiencies which should give Reclamation pause when considering its inclusion in present form as an alternative in a supplemental DEIS.

First, the proposal in its current form does not conform with the purpose and need of the Interim criteria. The 7 State Plan does not provide a starting point for measurement of California's consumption, but given that such consumption has been as high as 5.2 maf in recent years and the plan envisions maximum conservation of 490,000 af by 2016, this plan will fail to bring California within its legally entitled use during the implementation period.

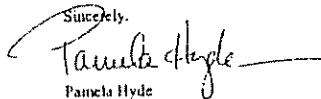
Second, the proposed plan inappropriately attempts to constrain the Secretary's discretion to allocate unused apportionments under Article II(B)(6) of the Supreme Court Decree in *Arizona v. California*. The states may not dictate how the Secretary is to use his discretion in making such allocations, and should the Secretary wish to establish firm guidelines for the exercise of his discretion, as he is currently doing in regard to surplus criteria, he would arguably be subject to the requirements of NEPA.

Finally, the proposed plan inappropriately attempts to preclude releases of water for any purposes other than those outlined in the Plan. This would preclude potential releases for environmental mitigation. The Secretary may need to release water to meet his other legal responsibilities as water master in the lower Colorado River, and the states lack legal authority to prohibit him from making releases for other purposes.

In conclusion, Southwest Rivers believes that the DEIS is inadequate and must be revised, augmented and reissued as a Supplemental DEIS. We feel that the omissions and deficiencies that we have identified in these comments clearly point out that the DEIS is so inadequate as to preclude meaningful analysis. We earnestly hope that the supplemental DEIS will recognize the *core* fact that environmental needs *must* be met before any quantity of discretionary water is dedicated to consumptive uses. Until that occurs, the additional water is not truly "surplus."

Feel free to contact me if you have any questions about our comments.

Sincerely,


Pamela Hyde
Executive Director for Policy
Southwest Rivers

19: The preferred alternative in this FEIS has been derived from the Seven States proposal. Reclamation did not structure the preferred alternative precisely as described in that draft proposal, but made some changes for consistency with the purpose and need of the proposed action. Reclamation policy and operational procedures

20: Reclamation does not concur with the opinion expressed in this comment. The analysis of effects of the alternatives on reservoir levels and river flows, and the potential effects on resources, provide a meaningful disclosure of effects for public consideration and permit a reasoned choice by the decision maker. This FEIS contains various refinements and additional detail from public comment, modeling, and coordination with interested parties and agencies.